

Third Edition

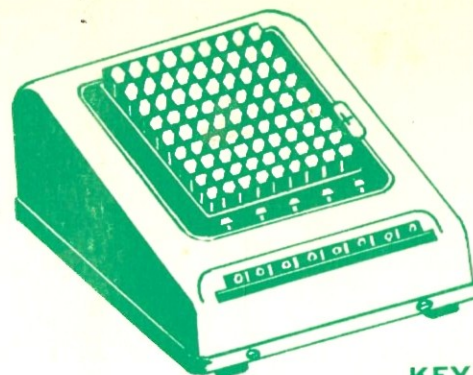
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South-Western
Publishing Company

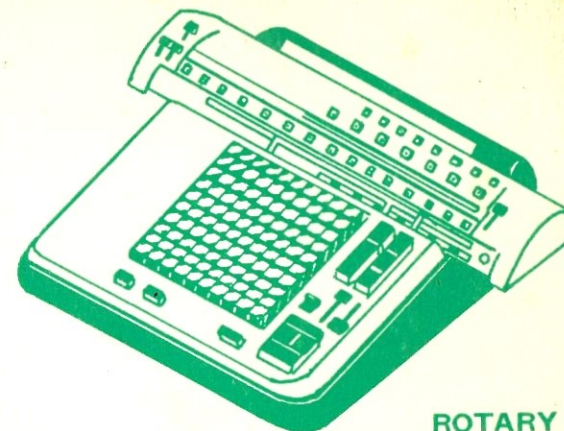
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M69



KEY-DRIVEN



ROTARY



FULL-KEYBOARD



TEN-KEY

Office Machines Course

ADDING AND CALCULATING MACHINES



OFFICE MACHINES COURSE

Third Edition

for the

Full=Keyboard Adding Listing Machine

Ten=Key Adding Listing Machine

Rotary Calculator

Key=Driven Calculator

By

Peter L. Agnew

and

Nicholas J. Cornelia



PUBLISHED BY

SOUTH=WESTERN PUBLISHING COMPANY

CINCINNATI 27

NEW ROCHELLE, N. Y.

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FOREWORD

This book presents well-organized instructional material for use with the four types of adding and calculating machines — the full-keyboard adding listing machine, the ten-key adding listing machine, the rotary calculator, and the key-driven calculator. It is designed to provide a reasonable skill in the use of each of these four types of machines.

The fifty jobs include ten on the full-keyboard adding listing machine, ten on the ten-key adding listing machine, fifteen on the rotary calculator, and fifteen on the key-driven calculator. Each job is planned so that the average student may complete it in a class period. The average student, through the use of all the practice material, should be able to develop a fair degree of efficiency in basic operation of each of the four types of adding and calculating machines.

If not enough time can be devoted to the course for the student to use all the material in this workbook, the best use will be made of it by having the students complete some, rather than all, of the work of each job. When time must be saved, the simplest as well as most satisfactory procedure to follow is to have the students complete every other problem in each job, rather than every problem in every job.

In planning and preparing this instructional material, certain basic qualities have been maintained:

1. The instructional materials are well within the range of the ability of the student who may use this book.
2. With the use of this instructional material, the student should attain a reasonable degree of efficiency in the basic operation of the four types of adding and calculating machines and do so in a reasonable length of time.
3. The teaching materials are carefully planned, easy to follow, convenient for practice, and simple to check.
4. The jobs of this book are arranged in carefully planned sequences, going from the simple to the somewhat more complex operations.
5. The materials in this course may be used on any of the various adding and calculating machines that are on the market. Special instructions are included to cover the more common differences that exist among these makes of machines and the various models thereof.
6. The format of the book is designed so that it may be used easily at the machine. Students may remove the parts of the pages that contain problems and leave in the book for future reference the parts that contain instructional material.
7. The book is planned so that it is as self-instructional as possible. All instructions for new work are presented in an easy-to-follow, step-by-step plan.
8. Each timed drill contains problems which test the student's mastery of the new procedures presented in the job as well as provide the basis for the development of a reasonable speed. Small figures at the right of each problem indicate the stroke or digital count, usually in convenient multiples of ten, and provide the basis for intensive speed and control drills.
9. The last job sheet of each of the four sections of this book contains a comprehensive review. These job sheets — numbers 10, 20, 35 and 50 — may be used as timed tests or as reviews, at the option of the teacher.
10. Each job in this book is planned so that it introduces something new and also affords ample review of everything that has been taught in prior jobs.

The authors would like to take this opportunity to express appreciation to the various machine manufacturers and their representatives who have been so cooperative.

P. L. A.

N. J. C.

FULL-KEYBOARD ADDING LISTING MACHINE

JOB No. 4 TECHNIQUE FOR ADDITION — USE OF THUMB AND AUTOMATIC ZEROS	Name _____ Period _____ Date _____	No. of Errors _____ GDPM _____ Rating _____
--	---------------------------------------	---

(1)	(2)	(3)	(4)	(5)	(6)	
1.23	3.57	4.58	7.86	8.97	2.61	
7.89	4.69	2.34	5.63	2.31	5.83	
2.34	6.79	5.67	3.72	6.94	8.96	
5.67	1.34	7.89	5.73	3.42	2.41	1
2.36	4.69	6.89	7.96	5.64	6.84	2
4.69	2.45	1.45	2.51	4.72	3.52	3
7.89	4.58	4.79	6.74	7.86	7.83	4
3.46	2.47	2.56	3.62	2.41	5.62	5
6.89	7.89	4.68	7.94	8.96	8.97	6
1.47	3.57	2.58	4.61	3.71	3.72	7
5.67	2.46	1.47	6.83	7.84	8.94	8
3.47	5.89	5.78	5.72	4.73	4.51	9
5.68	1.36	6.89	8.97	8.95	2.31	10
1.25	4.78	3.68	2.31	3.61	5.84	11
_____	_____	_____	_____	_____	_____	12
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
2.13	4.25	8.29	1.03	6.10	3.01	
8.79	6.57	6.27	4.09	8.40	6.80	
4.37	2.13	5.49	2.08	4.30	2.03	
7.68	8.78	6.58	6.07	6.20	4.70	
4.27	3.24	2.14	4.06	9.50	1.04	
7.58	8.59	8.69	7.08	5.30	8.50	
5.19	4.28	3.25	3.09	3.10	5.02	
8.19	7.57	8.59	5.08	8.20	3.02	
5.27	3.14	5.25	1.30	2.01	6.90	
6.37	6.47	7.49	3.80	5.03	2.04	
3.27	5.28	3.15	5.70	7.02	8.60	
6.56	7.29	7.19	2.50	9.05	1.05	
2.16	4.38	5.29	1.80	6.01	5.03	
7.69	6.18	8.27	3.50	4.02	3.05	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

Answers

1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____
11	_____
12	_____

JOB No. 4. (Cont'd.)

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.23	8.97	2.12	1.20	7.09	7.86	6.50	3.67
7.89	2.31	8.79	8.20	2.08	2.41	.04	7.89
3.47	6.73	4.25	5.70	6.05	6.89	9.03	.03
5.78	4.53	6.57	3.80	3.04	3.68	.05	6.80 ³¹⁰
1.25 ¹⁵	2.61 ⁶⁰	5.16 ¹⁰⁵	1.90 ¹⁵⁰	5.06 ¹⁹⁵	7.29 ²⁴⁰	2.70 ²⁸¹	3.52
4.78	5.83	7.48	7.60	8.09	5.47	.08	8.95
7.89	3.52	3.14	3.20	1.08	2.36	3.09	.05
3.67	7.83	6.47	6.90	9.01	4.69	.03	5.40 ³²⁰
1.45	2.31	2.14	4.60	1.03	7.86	5.40	3.02
6.78 ³⁰	6.95 ⁷⁵	8.69 ¹²⁰	3.60 ¹⁶⁵	4.05 ²¹⁰	5.63 ²⁵⁵	.09 ²⁹⁰	5.68
2.47	3.42	3.27	9.10	2.07	3.26	7.02	.18
4.58	5.61	6.56	2.80	6.04	7.59	.02	7.95
7.89	2.31	4.35	6.50	8.06	1.45	6.50	3.51
3.46	8.94	7.48	7.90	5.03	4.79	.06	1.07
4.58 ⁴⁵	5.61 ⁹⁰	3.27 ¹³⁵	9.10 ¹⁸⁰	2.07 ²²⁵	7.59 ²⁷⁰	.48 ³⁰⁰	1.25 ³⁴⁰

(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1.12	3.34	1.23	3.42	3.24	6.84	3.47	5.64
.38	.45	7.89	6.85	8.69	3.52	5.78	8.97
9.98	.12	3.57	5.64	5.68	8.95	1.46	6.74
.19 ³⁵⁰	7.30 ³⁹⁰	4.69	8.97	1.25	5.61	4.56	4.63
8.97	2.05	4.58 ⁴³⁵	6.94 ⁴⁸⁰	4.78 ⁵²⁵	2.51 ⁵⁷⁰	7.89 ⁶¹⁵	2.61 ⁶⁶⁰
2.31	3.52	2.34	3.42	6.79	6.84	2.36	5.83
5.78	7.83	3.47	2.12	1.47	8.97	6.78	7.85
.07 ³⁶⁰	1.25	5.78	8.79	5.78	3.72	1.24	3.72
1.45	4.78 ⁴⁰⁵	3.57	4.25	7.89	4.27	4.68	6.84
.16	.05	1.25 ⁴⁵⁰	6.57 ⁴⁹⁵	3.58 ⁵⁴⁰	7.58 ⁵⁸⁵	2.35 ⁶³⁰	4.53 ⁶⁷⁵
3.04	6.69	7.89	8.29	1.46	3.24	4.57	7.95
7.50 ³⁷¹	.68	3.67	3.17	4.67	4.59	3.45	3.51
5.54	7.30	8.97	6.28	5.64	2.14	6.78	5.74
1.34	9.02	2.31	4.15	4.72	6.59	7.89	4.62
9.98 ³⁸⁰	5.81 ⁴²⁰	5.78 ⁴⁶⁵	2.12 ⁵¹⁰	1.47 ⁵⁵⁵	3.24 ⁶⁰⁰	2.35 ⁶⁴⁵	7.95 ⁶⁹⁰

FULL-KEYBOARD ADDING LISTING MACHINE

JOB No. 9 PRACTICAL APPLI- CATIONS	Name _____ Period _____ Date _____	No. of Errors _____ GDPM _____ Rating _____
---	--	--

COMPARATIVE SALES REPORT					
January 2, 196-					
(1)	(2)	(3)	(4)	(5)	(6)
Items Sold	Items Sold	Increase (+)	Sales	Sales	Increase (+)
Last Year	This Year	Decrease (-)	Last Year	This Year	Decrease (-)
2,888	5,599	2,711 (+)	2,345.75	5,589.72	3,243.97 (+)
8,900	1,236	7,664 (-)	9,507.94	4,465.30	5,042.64 (-)
2,408	6,717	_____	1,006.07	3,751.97	_____
7,271	7,659	_____	9,272.55	9,890.18	_____
1,500	3,612	_____	5,427.65	8,025.74	_____
4,368	3,165	_____	7,117.94	3,152.06	_____
4,035	2,895	_____	8,829.01	5,405.41	_____
3,689	4,986	_____	5,840.37	7,831.09	_____
1,555	3,745	_____	2,905.74	9,064.75	_____
7,330	5,312	_____	7,315.81	5,401.27	_____
4,439	8,175	_____	2,679.40	7,192.87	_____
1,109	1,495	_____	8,972.09	9,240.45	_____
7,198	3,542	_____	9,095.35	4,861.24	_____
4,677	7,125	_____	4,278.45	7,426.85	_____
2,446	3,573	_____	6,094.94	9,670.19	_____
2,639	5,789	_____	3,507.41	8,059.07	_____
5,518	2,941	_____	9,645.05	5,944.56	_____
2,880	6,125	_____	1,875.23	7,304.25	_____
7,052	3,421	_____	5,280.49	2,786.32	_____
8,039	4,193	_____	9,419.86	4,539.47	_____
8,805	8,900	_____	7,931.76	7,995.18	_____
6,051	7,128	_____	4,395.98	6,806.47	_____
3,249	2,495	_____	9,675.07	7,027.05	_____
2,497	9,513	_____	1,145.75	9,751.41	_____
4,522	4,786	_____	5,174.75	6,670.89	_____
1,711	4,913	_____	1,673.42	5,749.07	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

JOB No. 9 (Cont'd.)

TIMED DRILL

Dept.	(1) Last Week's Sales	(2) This Week's Sales	(3) Amount of Increase (+) Decrease (-)	(4) Same Week's Sales Last Year	(5) Amount of Increase (+) Decrease (-)
A	405.48	307.26	98.22 -	405.15	97.89 -
B	150.84	406.46		490.28	
C	205.13	130.28		306.45	
D	220.19	306.72		106.47	
E	306.36 ²⁵	103.57 ¹⁰⁰	200	560.45 ⁴⁰⁰	500
F	261.27	323.12		471.35	
G	252.14	216.14		126.63	
H	516.36	471.37		675.51	
I	445.63	137.72		261.15	
J	561.15 ⁵⁰	126.65 ¹²⁵	250	157.45 ⁴²⁵	550
K	550.11	120.43		170.75	
L	120.56	106.12		150.75	
M	410.51	105.35		450.15	
N	450.68	304.66		108.83	
O	216.36 ⁷⁵	201.54 ¹⁵⁰	300	112.01 ⁴⁵⁰	600
Totals			375		676

(2)	(3)	(4)	(5)
.38	22.13	236.17	148 × 67
6.89	98.31	271.75	
6.35	63.25	289.13	252 × 63
3.22	11.24	248.25	
1.86 ⁶⁹⁰	47.23 ⁷⁴⁰	152.56 ⁸⁰⁵	453 × 181 ⁸⁷⁶
7.47	84.34	436.81	
6.67	20.25	435.50	547 × 124
6.44	59.04	360.87	
6.48	76.24	658.55	789 × 267
7.06 ⁷⁰⁵	48.52 ⁷⁶⁰	737.49 ⁸³⁰	
.17	54.60	443.98	843 × 378 ⁹⁰³
1.55	45.61	119.25	
8.34	21.75	149.30	145 × 489
5.02	14.50	167.75	
9.83 ⁷²⁰	32.55 ⁷⁸⁰	463.68 ⁸⁵⁵	412 × 158
			623 × 512 ⁹³⁰

TEN-KEY ADDING LISTING MACHINE

JOB No. 11 (Cont'd.)

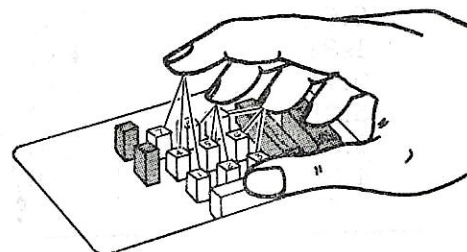
Name _____

Period _____

(17)	(18)	(19)	(20)	Answers
63.60	45.63	50.65	75.60	17
36.30	63.45	45.06	57.06	18
60.30	45.36	54.50	60.75	19
60.03	53.65	40.64	76.50	20
30.06	53.63	56.50	70.65	21
63.60	36.54	46.05	89.70	22
36.30	46.35	40.64	45.69	23
60.03	56.36	65.60	84.90	24
30.06	53.66	56.74	45.90	
33.60	33.65	67.40	89.60	
66.30	45.63	74.56	60.59	
66.63	56.36	47.50	40.89	
60.33	54.63	45.75	90.74	
30.66	45.36	57.74	80.96	
_____	_____	_____	_____	
_____	_____	_____	_____	

(21)	(22)	(23)	(24)
44.40	33.30	56.90	70.70
55.50	44.50	45.80	80.80
66.60	55.60	40.70	90.90
44.70	66.50	50.80	40.10
55.80	55.40	60.90	50.20
66.90	44.70	47.00	60.30
77.70	55.80	58.00	45.60
88.80	69.00	69.00	65.40
99.90	74.40	44.00	41.40
44.10	85.50	55.00	52.50
55.20	96.60	66.00	63.60
66.30	74.50	77.00	47.40
11.10	85.60	88.00	58.50
22.20	96.50	99.00	69.60
_____	_____	_____	_____
_____	_____	_____	_____

Keys in One Vertical Row are Controlled by the Same Finger



(27)

JOB No. 11 (Cont'd.)

(25)

6.17
2.93
4.83
4.29
7.35
8.25
7.86
5.16
2.67
7.38
6.23
2.18
6.17
2.93

(26)

5.10
8.80
9.47
1.90
9.16
4.20
3.59
4.48
9.80
4.25
1.97
4.95
5.10
8.80

(27)

1.49
6.91
5.12
8.83
1.47
4.82
3.62
1.87
5.15
1.67
6.49
4.26
1.49
6.91

(28)

4.42
8.99
8.33
4.47
6.00
2.61
9.41
3.24
7.24
1.74
5.36
2.64
4.42
8.99

Answers

25	
26	
27	
28	
29	
30	
31	
32	

(29)

4.08
8.60
1.10
9.07
5.84
8.50
9.60
8.63
1.84
9.74
5.21
9.58
4.08
8.60

(30)

5.08
1.20
5.07
4.50
6.08
9.09
3.02
7.40
2.10
1.80
5.09
3.60
5.08
1.20

(31)

6.03
7.06
3.07
8.90
9.80
4.06
7.08
1.09
6.02
2.01
6.70
4.07
6.03
7.06

(32)

3.38
2.74
9.11
4.38
7.08
1.41
3.12
4.69
3.99
5.68
5.81
9.87
3.38
2.74

(28)

TEN-KEY ADDING LISTING MACHINE

JOB No. 11 (Cont'd.)

Name _____

Period _____

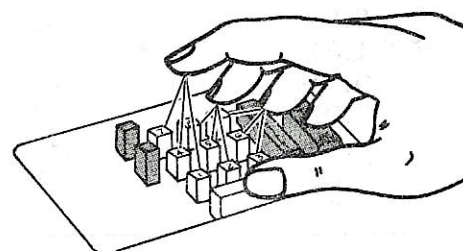
(17)	(18)	(19)	(20)
63.60	45.63	50.65	75.60
36.30	63.45	45.06	57.06
60.30	45.36	54.50	60.75
60.03	53.65	40.64	76.50
30.06	53.63	56.50	70.65
63.60	36.54	46.05	89.70
36.30	46.35	40.64	45.69
60.03	56.36	65.60	84.90
30.06	53.66	56.74	45.90
33.60	33.65	67.40	89.60
66.30	45.63	74.56	60.59
66.63	56.36	47.50	40.89
60.33	54.63	45.75	90.74
30.66	45.36	57.74	80.96

Answers

17	
18	
19	
20	
21	
22	
23	
24	

(21)	(22)	(23)	(24)
44.40	33.30	56.90	70.70
55.50	44.50	45.80	80.80
66.60	55.60	40.70	90.90
44.70	66.50	50.80	40.10
55.80	55.40	60.90	50.20
66.90	44.70	47.00	60.30
77.70	55.80	58.00	45.60
88.80	69.00	69.00	65.40
99.90	74.40	44.00	41.40
44.10	85.50	55.00	52.50
55.20	96.60	66.00	63.60
66.30	74.50	77.00	47.40
11.10	85.60	88.00	58.50
22.20	96.50	99.00	69.60

Keys in One Vertical Row are Controlled by the Same Finger



(27)

JOB No. 11 (Cont'd.)

(25)

6.17
2.93
4.83
4.29
7.35
8.25
7.86
5.16
2.67
7.38
6.23
2.18
6.17
2.93

(26)

5.10
8.80
9.47
1.90
9.16
4.20
3.59
4.48
9.80
4.25
1.97
4.95
5.10
8.80

(27)

1.49
6.91
5.12
8.83
1.47
4.82
3.62
1.87
5.15
1.67
6.49
4.26
1.49
6.91

(28)

4.42
8.99
8.33
4.47
6.00
2.61
9.41
3.24
7.24
1.74
5.36
2.64
4.42
8.99

Answers

25	
26	
27	
28	
29	
30	
31	
32	

(29)

4.08
8.60
1.10
9.07
5.84
8.50
9.60
8.63
1.84
9.74
5.21
9.58
4.08
8.60

(30)

5.08
1.20
5.07
4.50
6.08
9.09
3.02
7.40
2.10
1.80
5.09
3.60
5.08
1.20

(31)

6.03
7.06
3.07
8.90
9.80
4.06
7.08
1.09
6.02
2.01
6.70
4.07
6.03
7.06

(32)

3.38
2.74
9.11
4.38
7.08
1.41
3.12
4.69
3.99
5.68
5.81
9.87
3.38
2.74

(28)

TEN-KEY ADDING LISTING MACHINE

JOB No. 16 THE SUBTOTAL	Name _____	No. of Errors _____
	Period _____ Date _____	GSPM _____
		Rating _____

Tape for Problem (1), from the Monroe	(1)	(2)	(3)	(4)	(5)	Answers
	5,599.02	123.33	3,824.05	30.30	281.24	
	103.00	46.52	7.21	843.29	67.04	s
	474.50	3,761.05	146.30	1,565.00	112.36	1
*	890.25	371.10	43.65	3.44	5,060.91	s
1#	67.17	28.15	1,437.07	127.02	139.52	2
	1,511.56	2,523.50	118.90	94.40	80.60	s
5.599.02	4,563.31	1,317.93	31.79	6,131.79	6,189.75	3
103.00	395.06	2.51	83.54	83.54		s
474.50		146.74		36.93		4
890.25		42.70		473.15	176.08	s
67.17	2,859.28	1,662.13	480.71	3,256.05	54.76	5
1.511.56	394.95	15.75	7,150.03	32.20	1,345.93	s
4.563.31	6,357.90		14.25	315.56	47.39	
395.06	331.97		1,006.27	2,925.70	402.95	
13.603.87S	32.60	3,337.25	148.53		3,998.36	
2.859.28	6.59	8,105.00	63.40		450.89	
394.95	13.30	56.45	240.01	361.98	8.65	
6.357.90	407.36	7.20	469.35	15.67	320.07	
331.97	1,515.70	135.47	37.99	171.10	51.37	
32.60	142.87	70.02	32.51	42.81	1,909.45	
6.59	28.67	5,318.96	262.50	1,640.19	31.77	
13.30	85.56	432.38	2,740.28	140.36	140.46	
407.36	480.41	25.97	338.25	32.69	102.67	
1.515.70	7,006.70	412.90	4.26	810.24	2,316.71	
142.87	1.22	32.08	154.30	1,670.74	72.80	
28.67	43.90	335.50	42.76	12.36	8,205.17	
85.56	487.75	29.75	1,529.50	6.67	408.66	
480.41	44.77	259.28	18.14	2,309.52	3,687.50	
7.006.70						
1.22						
43.90						
487.75						
44.77						
33.845.37*						

JOB No. 16 (Cont'd.)

TIMED DRILL

(1)	(2)	(3)	(4)	(5)
35.75	16.94	194.05	4,977.86	586.63
55.37	29.05	295.83	8,567.06	131.96
36.56	66.35	175.78	3,028.63	.73
27.65	77.33	358.12	4,173.90	638.35
68.24 ²⁵	15.95 ¹⁷⁵	777.48 ³³⁰	6,010.57 ⁵¹⁵	1.64 ⁷¹⁵
76.07	87.05	260.61	2,939.65	57.22
51.59	64.82	542.60	1,064.70	9.62
45.92	59.06	452.31	7,630.18	10.46
65.70	63.74	716.30	2,108.94	173.07
98.02 ⁵⁰	42.95 ²⁰⁰	253.75 ³⁶⁰	1,637.18 ⁵⁵⁰	25.31 ⁷⁴⁰
39.80	91.73	229.70	4,005.54	871.57
95.42	58.03	205.06	2,681.09	11.93
79.13	40.62	534.87	5,992.53	639.85
46.50	37.55	896.70	8,569.70	.25
82.64 ⁷⁵	28.46 ²²⁵	409.14 ³⁹⁰	1,802.26 ⁵⁸⁵	61.98 ⁷⁶⁵
79.13	97.31	574.80	3,903.40	227.13
24.08	52.67	267.09	8,053.18	173.07
50.92	56.09	101.71	9,834.26	69.84
54.29	16.60	953.28	5,980.05	9.40
19.56 ¹⁰⁰	43.67 ²⁵⁰	542.40 ⁴²⁰	2,407.26 ⁶²⁰	1.20 ⁷⁹⁰
90.74	63.92	375.38	6,420.01	938.00
78.32	76.07	247.06	1,163.70	53.20
68.42	17.48	670.64	2,719.25	455.71
84.80	79.22	439.07	5,746.03	92.75
13.97 ¹²⁵	31.88 ²⁷⁵	271.33 ⁴⁵⁰	3,407.42 ⁶⁵⁵	.50 ⁸¹⁵
57.08	44.93	770.87	1,087.66	8.64
32.84	38.45	388.09	4,079.38	597.40
21.98	42.09	120.43	1,359.74	23.13
28.55	83.63	193.45	4,536.85	823.55
37.75 ¹⁵⁰	67.85 ³⁰⁰	172.80 ⁴⁸⁰	1,632.69 ⁶⁹⁰	4.98 ⁸⁴⁰

TEN-KEY ADDING LISTING MACHINE

JOB No. 18 (Cont'd.)

Name _____

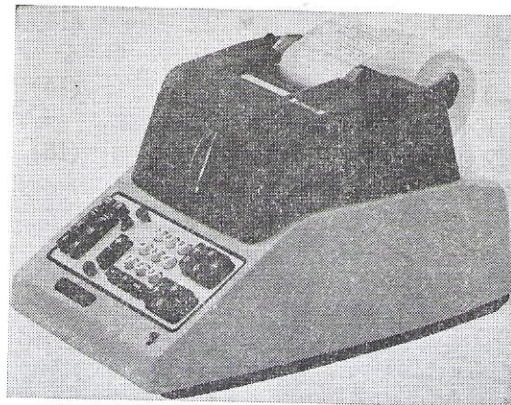
Period _____

REVIEW

(1)	(2)	(3)	(4)	(5)	Answers
6,201.73	448.51	883.43	930.87	621.75	1
2,889.09	905.60	-568.12	-496.10	-274.63	2
7,016.24	434.54				3
2,631.78	233.72				4
6,520.20	149.34				5
1,653.50	858.29				6
3,065.02	955.38				7
2,597.38	329.91	(6)	(7)	(8)	8
9,202.95	220.16	940.21	736.34	601.59	9
2,519.43	212.74	-452.98	-131.27	-113.66	10
1,913.15	798.20				11
4,139.21	432.44				12
8,749.18	353.25				13
5,773.42	414.66				14
8,522.77	709.13	(9) 5,814 × 387			15
3,089.96	145.19				
9,305.22	439.28	(10) 367 × 49			
1,748.00	817.14				
8,306.54	292.01	(11) 7,829 × 352			
2,542.14	568.09				
4,580.76	867.25	(12) 9,621 × 263			
2,860.18	540.17				
8,532.50	821.08				
6,793.02	634.22	(13) 388 ÷ 80			
1,509.26	510.71				
9,827.88	234.13	(14) 825 ÷ 500			
1,473.54	542.25				
2,018.02	408.59	(15) 385 ÷ 25			
4,297.99	621.87				
1,609.52	145.15				
5,135.29	795.98				

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)
94.73	953.65	1,191.71	9.38	8.27	16.94
52.97	819.27	9,146.23	-1.71 ⁵⁶³	-3.14	-1.66 ⁵⁸⁰
96.13	657.53	2,113.14			
59.27	593.74	8,682.07			
63.59 ²⁵	201.29 ¹⁸⁵	3,364.61 ³⁷⁵			
43.01	308.11	7,678.01			
19.85	304.05	4,713.62			
64.62	148.47	6,615.91			
11.34	672.05	5,617.43	(7) 293 × 125		
23.59 ⁵⁰	392.09 ²¹⁵	1,316.04 ⁴¹⁰	(8) 809 × 216 ⁵⁹⁶		
41.38	134.52	9,246.30	(9) 774 × 618		
23.76	948.97	2,327.02	(10) 1,341 × 236 ⁶¹³		
54.62	536.43	8,542.38			
48.33	273.77	3,169.02			
66.87 ⁷⁵	694.46 ²⁴⁵	7,309.40 ⁴⁴⁵			
52.90	187.91	4,831.66			
76.15	424.30	6,714.33			
85.63	169.78	5,263.20	(11) 560 ÷ 80 ⁶²¹		
37.04	887.16	3,185.48	(12) 375 ÷ 25		
52.51 ¹⁰⁰	950.85 ²⁷⁵	1,631.16 ⁴⁸⁰	(13) 340 ÷ 20 ⁶²⁹		
34.39	379.24	4,216.23	(14) 680 ÷ 40		
56.32	454.82	8,540.25	(15) 1,600 ÷ 500 ⁶⁴⁰		
40.57	702.43	2,715.94			
63.63	105.21	6,451.15			
32.35 ¹²⁵	489.79 ³⁰⁵	1,401.06 ⁵¹⁵			
90.14	410.37	5,397.92			
42.36	891.23	9,664.54			
18.92	717.68	2,345.75			
94.05	855.17	8,112.16			
26.28	790.27	6,474.85			
37.65 ¹⁵⁵	11.44 ³⁴⁰	83.19 ⁵⁵⁵			



The Olivetti Tetractys Printing Calculator

TEN-KEY ADDING LISTING MACHINE

JOB No. 19 PRACTICAL APPLI- CATIONS	Name _____ Period _____ Date _____	No. of Errors _____ GSPM _____ Rating _____
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WEEKLY SALES REPORT — WEEK OF MARCH 3, 196-

Dept.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
101	22.13	14.38	10.63	15.26	36.25	236.17	
102	16.89	98.31	12.37	21.39	15.14	271.75	
103	16.35	63.25	16.10	17.85	41.59	289.13	
104	13.22	11.24	11.18	16.97	83.73	248.25	
105	11.86	47.23	12.16	25.65	66.35	152.56	
106	17.47	84.34	12.12	19.52	59.43	436.81	
107	16.67	20.25	38.73	29.43	30.31	435.50	
108	16.44	59.04	14.88	12.16	11.23	360.87	
109	16.48	76.24	29.79	19.89	47.66	658.55	
110	17.06	48.52	13.02	13.02	12.12	737.49	
111	20.17	54.60	14.66	18.34	81.25	443.98	
112	21.55	45.61	15.74	21.86	63.33	119.25	
113	18.34	21.75	16.11	16.42	56.25	149.30	
114	19.83	32.55	17.29	15.30	21.67	467.78	
115	19.89	62.73	14.23	20.19	38.75	244.65	
116	17.85	49.56	17.79	17.26	56.25	263.91	
117	22.19	73.54	16.86	24.88	18.25	551.87	
118	21.63	32.71	13.87	13.72	93.75	285.30	
119	20.43	27.68	15.82	15.67	76.67	249.95	
120	23.61	31.25	24.14	25.95	41.25	810.50	
Totals							

TIMED DRILL

WEEKLY SALES REPORT — Week of March 10, 196-

Dept.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total
A	89.72	95.01	70.81	143.27	964.93	905.75	
B	65.30	41.24	73.65	827.39	872.86	401.27	
C	51.70	59.17	84.49	764.95	213.17	192.87	
D	90.18	47.52	59.69	515.77	407.34	576.95	
E	42.69 ²⁵	34.25 ¹²⁵	82.43 ²²⁵	420.45 ³³⁰	974.10 ⁴⁵⁰	498.71 ⁵⁷⁰	825
F	80.63	86.32	94.10	340.84	154.08	779.86	
G	36.11	39.47	38.23	971.57	604.13	104.59	
H	63.15	95.18	81.77	262.05	837.04	504.25	
I	12.32	86.47	40.45	183.89	492.40	235.45	
J	39.04 ⁵⁰	27.05 ¹⁵⁰	61.24 ²⁵⁰	439.52 ³⁶⁰	258.09 ⁴⁸⁰	998.32 ⁶⁰⁰	990
K	50.51	51.41	26.85	671.29	749.68	105.61	
L	70.49	70.89	70.19	850.41	970.79	530.92	
M	87.75	49.07	59.07	943.17	850.73	153.86	
N	50.98	50.20	44.56	395.04	447.29	894.13	
O	94.54 ⁷⁵	34.55 ¹⁷⁵	71.24 ²⁷⁵	275.09 ³⁹⁰	797.43 ⁵¹⁰	602.51 ⁶³⁰	1155
P	57.87	51.34	12.51	198.44	617.58	857.05	
Q	84.59	60.91	74.78	472.05	825.74	978.14	
R	43.15	47.23	99.15	817.15	152.06	710.96	
S	16.45	39.08	88.69	117.52	145.41	680.27	
T	28.50 ¹⁰⁰	15.24 ²⁰⁰	27.45 ³⁰⁰	214.98 ⁴²⁰	531.09 ⁵⁴⁰	384.25 ⁶⁶⁰	1320
Totals							1460
							1505

TEN-KEY ADDING LISTING MACHINE

JOB No. 20 REVIEW	Name _____		Time Completed _____
	Period _____	Date _____	Time Started _____
	GSPM _____	Rating _____	Minutes Required _____

(1)	(2)	(3)	(4)	(5)	Answers
6.35	4.59	51.15	264.11	4,231.69	1
2.77	7.16	83.26	412.68	9,280.12	2
6.63	3.87	13.42	928.22	8,628.35	3
5.40	9.34	82.71	318.55	1,379.21	4
3.72 ²⁰	6.12 ¹²⁰	24.10 ²²⁵	543.02 ³⁵⁵	5,264.42 ⁵¹⁰	5
4.26	3.29	68.35 Er.	350.28	8,704.59	
9.53	3.58	68.35 —	982.10	3,315.62	
5.69	9.02	86.35	412.36	2,685.03	
1.38	1.59	12.04	864.22	3,104.29	
3.21 ⁴⁰	6.05 ¹⁴⁰	25.19 ²⁵⁰	526.17 ³⁸⁵	3,321.23 ⁵⁴⁵	
3.17	2.16	31.25	714.04	5,960.67	
5.02	3.41	13.64	450.45	3,121.42	
7.45	6.25	42.32	321.98	9,672.23	
6.13	5.64	59.40	540.66	2,021.46	
2.15 ⁶⁰	2.08 ¹⁶⁰	17.26 ²⁷⁵	231.25 ⁴¹⁵	3,482.15 ⁵⁸⁰	
5.51	1.41	83.49	159.07	2,150.08	
6.22	5.26	64.05 Er.	642.14	2,793.16	
5.78	7.04	64.05 —	143.39	7,383.01	
4.05	5.28	64.50	190.19	1,320.25	
1.58 ⁸⁰	3.52 ¹⁸⁰	73.53 ³⁰⁰	503.25 ⁴⁴⁵	3,750.65 ⁶¹⁵	
5.90	5.12	42.61	309.27	4,327.10	
3.64	2.75	52.37	150.54	3,876.26	
6.82	9.14	60.58	365.33	7,695.24	
5.41	2.09	54.06	507.51	1,327.42	
3.58 ¹⁰⁰	4.70 ²⁰⁰	35.75 ³²⁵	260.25 ⁴⁷⁵	2,475.76 ⁶⁵⁰	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	

JOB No. 20 (Cont'd.)

(6)	(7)	(8)	(9)	(10)	(11)	Answers
3.30	160.73	460.72	16.14	19.30	306.19	6
-1.17	-40.34	-71.26 ⁶⁸⁰	-9.94	-16.40	-68.55 ⁷¹⁰	7
						8
						9
(12) 496 × 140			(17) 660 ÷ 80 ⁷⁵²			10
(13) 306 × 619 ⁷²⁵			(Reciprocal of 80 is .0125)			11
(14) 268 × 862			(18) 1800 ÷ 500			12
(15) 232 × 207 ⁷⁴⁰			(Reciprocal of 500 is .002)			13
(16) 495 ÷ 25			(19) 445 ÷ 40 ⁷⁶³			14
(Reciprocal of 25 is .04)			(Reciprocal of 40 is .025)			15
			(20)			16
4,190.19	9,672.23	2,310.64	3,421.29			17
1,032.47	2,021.46	2,134.13	5,072.43			18
2,503.24	482.15	903.25	313.06			19
128.23 ⁷⁹⁰	50.08 ⁸⁹⁵	37.56 ¹⁰⁰⁰	52.18 ¹¹⁰⁵			20
.08		.09				
1.75	S	1.90	S			
6,390.27	213.16	6,709.20	211.75			
2,150.54	7,383.01	2,317.63	3,412.07			
65.33 ⁸¹⁵	1,320.25	33.64 ¹⁰²⁵	4,125.38			
507.51	50.65 ⁹²⁰	152.41	31.55 ¹¹³⁰			
4,231.69	372.10	8,236.25	203.27			
.43	3,876.26	.63	6,969.61			
9,120.12	.24	5,681.09	.25			
.05 ⁸⁴⁰	1,327.42	.06 ¹⁰⁵⁰	7,878.53			
	.06 ⁹⁴⁵		.07 ¹¹⁵⁵			
S	132.47	S	507.94			
628.35	7,628.23	304.31	1,875.23			
1,379.21	97.03	2,793.42	19.86			
21.43	.64	41.34	1.85			
.25	.05	.47	.03			
1.04	25.85	1.03	27.85			
67.75 ⁸⁷⁰	.04 ⁹⁷⁵	26.24 ¹⁰⁸⁰	163.06 ¹¹⁹⁰			

ROTARY CALCULATOR

JOB No. 21 ADDITION	Name _____	No. of Errors _____
	Period _____ Date _____	Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
9	555	990	40	99	444	1
99	4	909	440	808	44	2
999	44	80	404	888	303	3
8	444	880	30	88	333	4
88	3	808	330	707	33	5
888	33	70	303	777	202	6
7	333	770	20	77	222	7
77	2	707	220	606	22	8
777	22	60	202	666	101	9
6	222	660	10	66	111	10
66	1	606	110	505	11	11
666	11	50	101	555	999	12
5	111	550	909	55	777	
55	90	505	999	404	555	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
888	22	55	112	809	668	
333	555	666	223	120	779	
666	88	11	334	230	103	
222	666	555	445	340	204	
555	99	22	556	450	305	
444	777	444	667	560	406	
111	11	33	889	670	507	
333	888	333	102	780	608	
555	22	44	203	890	709	
222	999	222	304	113	130	
666	33	55	405	224	240	
444	888	111	506	335	350	
777	44	66	607	446	460	
555	777	999	708	557	570	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 21 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)	Answers
680	609	408	409	209	227	13
790	250	509	160	119	228	14
890	360	150	270	109	118	15
114	470	260	380	190	334	16
225	580	370	490	112	557	17
336	690	480	117	779	336	18
447	115	590	228	114	226	19
558	226	116	339	559	338	20
669	337	227	107	116	117	21
104	448	338	208	339	229	22
205	559	449	309	223	445	23
306	105	106	118	668	335	24
407	206	207	229	225	447	
508	307	308	108	448	337	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(19)	(20)	(21)	(22)	(23)	(24)	
227	559	21	97	83	201	
556	116	32	41	94	302	
224	339	43	52	71	907	
558	223	54	63	82	401	
115	668	65	74	93	706	
449	225	76	85	81	807	
667	448	87	96	92	704	
446	227	98	51	91	902	
669	557	31	62	42	703	
889	336	42	73	21	301	
113	668	53	84	74	803	
119	445	64	95	62	902	
779	779	75	61	72	205	
114	115	86	72	41	307	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

ROTARY CALCULATOR

JOB No. 23 (Cont'd.)

Name _____

Period _____

1. Add each column vertically, and record the answer under the last item in the column.
2. Subtract the total credits from the total debits.
3. Record the difference in the "Balance" column.
4. If the credits exceed the debits, record the difference as a credit balance — "Cr."

Answers

31	
32	
33	
34	
35	
36	

CUSTOMERS' ACCOUNTS

(31)

Charges	Credits	Balance
450 15	2 35	
2 35	146 85	
670 80	450 15	
146 85		
785 05		

(32)

Charges	Credits	Balance
50 00	214 68	
214 68	50 00	
1 75	1 75	
986 50	25 00	
45 60		

(33)

Charges	Credits	Balance
175 00	15 80	
15 80	175 00	
65 75	50 00	
106 30	25 00	
478 15	75 00	

(34)

Charges	Credits	Balance
175 85	1 25	
13 50	50 00	
482 12	100 00	
500 00		
655 10		

CUSTOMERS' ACCOUNTS with CREDIT BALANCES

(35)

Charges	Credits	Balance
50 00	17 60	
690 45	690 45	
17 60	50 00	
110 25	500 00	
125 85		

(36)

Charges	Credits	Balance
20 00	71 95	
71 95	985 12	
185 12	20 00	
460 75	1 25	
1 25	460 75	

(59)

TIMED DRILL

Comparative Data

1. Add number in columns labeled "This Year."
2. Subtract number in columns labeled "Last Year."
3. Record remainder in columns labeled "Amount of Increase."
4. Add vertically numbers in columns labeled "This Year" of **Sales** section.
5. Add vertically numbers in columns labeled "Last Year" of **Sales** section.
6. Add vertically numbers in columns labeled "Amount of Increase" of **Sales** section.
7. Repeat steps 4, 5, and 6 for **Net Profit** section.

Sales (Dollars Only)			Net Profit (Dollars Only)		
<u>This Year</u>	<u>Last Year</u>	<u>Amount of Increase</u>	<u>This Year</u>	<u>Last Year</u>	<u>Amount of Increase</u>
(1) 21,236	11,173 ¹⁰	_____	(15) 18,556	18,105 ¹⁵⁰	_____
(2) 17,271	15,923	_____	(16) 14,255	12,499	_____
(3) 36,872	35,249	_____	(17) 17,260	16,672	_____
(4) 16,555	16,051	_____	(18) 26,645	25,142	_____
(5) 27,330	25,805 ⁵⁰	_____	(19) 17,820	15,062 ¹⁹⁰	_____
(6) 14,439	14,009	_____	(20) 26,318	24,407	_____
(7) 21,109	10,052	_____	(21) 13,269	12,806	_____
(8) 41,198	38,770	_____	(22) 11,059	10,834	_____
(9) 14,677	13,518	_____	(23) 15,599	14,804	_____
(10) 12,446	12,001 ¹⁰⁰	_____	(24) 18,900	17,490 ²⁴⁰	_____
(11) 26,535	19,051	_____	(25) 16,717	14,663	_____
(12) 13,684	11,249	_____	(26) 23,330	21,400	_____
(13) 14,035	10,497	_____	(27) 14,073	13,061	_____
(14) 24,368	21,522 ¹⁴⁰	_____	(28) 11,515	10,662 ²⁸⁰	_____
_____350	_____420	_____475	_____545	_____615	_____665
Totals =	=	=	=	=	=

ROTARY CALCULATOR

JOB No. 31 (Cont'd.)

Name _____

Period _____

Use Method III, page 78, to find the **amount** of the **discount** and the **net amount**. (On machines with fewer than ten columns, use Method I, page 75.)

		Answers	
	Discount	Net Amount	
(31) 50.25 less 15%	_____	_____	31
(32) 37.50 less 25%	_____	_____	32
(33) 70.45 less 20%	_____	_____	33
(34) 9.78 less 10%	_____	_____	34
(35) 25.45 less 18%	_____	_____	35
(36) 87.51 less 12%	_____	_____	36
(37) 52.45 less 10%	_____	_____	37
(38) 46.80 less 5%	_____	_____	38
(39) 75.01 less 25%	_____	_____	39
(40) 16.08 less 15%	_____	_____	40
(41) 30.85 less 8%	_____	_____	41
(42) 74.99 less 3%	_____	_____	42
(43) 49.83 less 35%	_____	_____	43
(44) 37.95 less 16%	_____	_____	44
(45) 56.68 less 10%	_____	_____	45

JOB No. 31 (Cont'd.)

TIMED DRILL

Add:

(1)	(2)	(3)	(4)	(5)	(6)
25.51	29.88	45.90	46.95	113.53	499.65
14.40	55.45	89.30	32.25	268.52	630.81
15.94	62.55	96.00	40.75	841.38	295.84
23.01	16.84	60.75	17.76	678.01	174.99
32.02 ²⁰	21.16 ⁸⁰	34.28 ¹⁴⁰	54.48 ²⁰⁰	314.67 ²⁶⁵	272.61 ³⁴⁰
45.62	47.91	94.83	67.70	451.38	156.86
54.07	78.61	93.07	61.85	950.73	804.53
22.07	89.04	64.42	34.93	560.25	152.97
64.20	20.28	48.48	62.34	296.64	403.02
73.80 ⁴⁰	48.22 ¹⁰⁰	46.91 ¹⁶⁰	16.60 ²²⁰	679.20 ²⁹⁰	174.54 ³⁶⁵
83.07	45.53	51.00	80.41	812.49	965.51
93.02	87.70	64.00	92.63	431.07	844.22
19.87	95.36	19.05	84.90	198.35	465.02
35.45	14.50	21.09	55.76	339.16	872.40
42.84 ⁶⁰	12.96 ¹²⁰	40.90 ¹⁸⁰	18.55 ²⁴⁰	540.81 ³¹⁵	475.52 ³⁹⁰

Subtract:

(7)	(8)	(9)	(10)	(11)	(12)
394.02	850.25	770.10	619.53	786.25	371.28
-147.31 ⁴⁰⁰	-289.90	-198.50 ⁴²⁰	-482.10	-482.10 ⁴⁴⁰	-192.83 ⁴⁵⁰

Find the discount and the net amount:

(13) 88.72 less 15%	Discount		Net Amount	
(14) 24.16 less 10%	"	466	"	"
(15) 87.89 less 12%	"		"	"
(16) 61.48 less 25%	"	482	"	"
(17) 14.30 less 18%	"		"	"
(18) 13.47 less 3%	"	498	"	"
(19) 19.43 less 5%	"		"	"
(20) 20.78 less 35%	"	514	"	"

ROTARY CALCULATOR

JOB No. 32 PERCENTAGE — INCREASE AND DECREASE	Name _____	No. of Errors _____
	Period _____ Date _____	GDPM _____
		Rating _____

Find the interest for 1 year:

- (1) On \$475.90 @ 5% _____
- (2) On \$162.75 @ 4 1/2% _____
- (3) On \$575.20 @ 1 1/4% _____
- (4) On \$602.34 @ 3 1/4% _____
- (5) On \$260.20 @ 2 3/4% _____

Find the dividend payable:

- (6) On \$583.45 @ 3 1/2% _____
- (7) On \$211.63 @ 6% _____
- (8) On \$604.21 @ 7% _____
- (9) On \$790.50 @ 8 1/4% _____
- (10) On \$125.75 @ 3/4% _____

Find the commission earned on:

- (11) Sales of \$3,156.12 @ 4 1/4% _____
- (12) Sales of \$6,525.70 @ 5 1/2% _____
- (13) Sales of \$2,189.28 @ 4 1/2% _____
- (14) Sales of \$2,104.45 @ 3 3/4% _____
- (15) Sales of \$8,196.40 @ 5 1/2% _____

Answers

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

JOB No. 32 (Cont'd.)

Find the per cent of increase in sales:

	Dept.	Sales		Amount of Increase	Percentage of Increase		Answers
		This Year	Last Year				(% Only)
(16)	A	2,389.12	2,135.15	_____	_____	16	
(17)	B	4,368.76	4,222.94	_____	_____	17	
(18)	C	5,655.57	5,460.15	_____	_____	18	
(19)	D	2,572.48	2,377.21	_____	_____	19	
(20)	E	3,162.85	2,982.65	_____	_____	20	
(21)	F	5,009.50	4,819.19	_____	_____	21	
(22)	G	2,443.93	2,140.39	_____	_____	22	
(23)	H	3,302.73	3,009.30	_____	_____	23	
(24)	I	1,790.58	1,522.45	_____	_____	24	
(25)	J	5,216.19	5,000.32	_____	_____	25	
(26)	K	2,121.85	1,987.73	_____	_____	26	
(27)	L	3,662.17	3,429.94	_____	_____	27	
(28)	M	3,302.08	3,051.65	_____	_____	28	
(29)	N	1,467.11	1,205.00	_____	_____	29	
(30)	O	3,196.49	2,852.23	_____	_____	30	

ROTARY CALCULATOR

JOB No. 32 (Cont'd.)

Name _____

Period _____

Find the per cent of decrease in operating expenses:

	Dept.	Expenses		Amount of Decrease	Percentage of Decrease		Answers
		This Year	Last Year				(% Only)
(31)	100.1	1,458.10	1,579.75	_____	_____	31	
(32)	100.5	6,321.15	6,850.93	_____	_____	32	
(33)	100.6	7,059.35	7,429.32	_____	_____	33	
(34)	200.7	4,933.28	5,360.68	_____	_____	34	
(35)	200.8	8,248.50	8,750.18	_____	_____	35	
(36)	200.9	5,982.75	6,175.47	_____	_____	36	
(37)	300.1	2,175.02	2,480.23	_____	_____	37	
(38)	300.2	3,241.46	3,425.81	_____	_____	38	
(39)	300.3	8,403.77	8,651.50	_____	_____	39	
(40)	300.4	6,478.12	6,783.18	_____	_____	40	
(41)	300.5	4,160.15	4,421.85	_____	_____	41	
(42)	300.8	3,001.19	3,280.49	_____	_____	42	
(43)	400.1	9,285.32	9,671.74	_____	_____	43	
(44)	400.2	5,842.95	6,113.50	_____	_____	44	
(45)	400.3	8,748.10	9,123.42	_____	_____	45	

Do not clear any dials.

- (3) Move the carriage, if necessary, so that the 1 of 121.65 in the register dials is over the 1 of 1,579.75 on the keyboard, and divide.
 - (4) Record the .0770 that appears in the counter dials as 7.7%, the answer.
- b. On semi-automatic calculators, follow the same procedure as for hand-operated models except use the add (+) bar or the

multiplication (X) bar to add, and the division (÷) key instead of a crank. On the Friden, move the (ADD) key to **up** position instead of latching down a repeat key.

c. On the fully automatic Monroe:

- (1) Move the carriage so that the decimal marker on the register dials is over that of the keyboard.
- (2) Index the **This Year** figure, 1,458.10, and depress the minus (−) bar.

JOB No. 32 (Cont'd.)

TIMED DRILL

Find the interest for 1 year on :

- | | |
|---|---|
| (1) 1,142.75 @ 5% _____ | (4) 309.27 @ $2\frac{3}{4}\%$ ³⁰ _____ |
| (2) 675.90 @ $4\frac{1}{4}\%$ ¹⁵ _____ | (5) 2,150.54 @ 4% _____ |
| (3) 4,190.19 @ 3% _____ | (6) 507.51 @ $1\frac{3}{4}\%$ ⁴⁵ _____ |

Find the dividend payable on:

- | | |
|---|--|
| (7) 7,365.54 @ 6% _____ | (10) 628.25 @ $3\frac{1}{2}\%$ ⁷⁵ _____ |
| (8) 231.69 @ $4\frac{3}{4}\%$ ⁶⁰ _____ | (11) 1,379.21 @ 8% _____ |
| (9) 9,280.12 @ 12% _____ | (12) 264.42 @ $5\frac{1}{4}\%$ ⁹⁰ _____ |

Find the commission earned on:

- | | |
|---|---|
| (13) 4,237.46 @ 9% _____ | (16) 303.34 @ $4\frac{1}{2}\%$ ¹²⁰ _____ |
| (14) 792.01 @ $6\frac{1}{4}\%$ ¹⁰⁵ _____ | (17) 6,152.41 @ 18% _____ |
| (15) 2,317.63 @ 15% _____ | (18) 264.63 @ $3\frac{1}{2}\%$ ¹³⁵ _____ |

Find percentage of increase or decrease:

Per Cent of Increase			Per Cent of Decrease		
Current	Previous		Current	Previous	
(19) 2,506.35	2,463.29	_____	(26) 4,823.58	5,014.04 ²³¹	_____
(20) 4,920.77	4,706.12 ¹⁵⁹	_____	(27) 2,519.02	2,750.45	_____
(21) 2,326.63	2,190.34	_____	(28) 7,651.59	7,821.98 ²⁵⁵	_____
(22) 4,585.40	4,230.87 ¹⁸³	_____	(29) 1,276.05	1,540.66	_____
(23) 9,063.72	8,827.16	_____	(30) 5,342.16	5,731.25 ²⁷⁹	_____
(24) 6,234.26	6,004.59 ²⁰⁷	_____	(31) 6,530.41	6,862.14	_____
(25) 4,390.53	4,125.41	_____	(32) 2,316.25	2,543.39 ³⁰³	_____

ROTARY CALCULATOR

JOB No. 33 ACCUMULATIVE MULTIPLICATION	Name _____		No. of Errors _____
	Period _____ Date _____		GDPM _____
			Rating _____

(1)	(2)	Answers
33.652 × 21.5025	35.875 × 2.3755	1
45.633 × 16.6105	28.755 × 4.55	2
76.804 × 10.8351	65.5 × 1.125	3
21.156 × 17.7775	7.375 × 4.1905	4
20.335 × 20.205	36.875 × 4.495	5

Check accuracy by accumulative multiplication:

(3)

36 pr. Misses' Black Oxfords	10.75 per pr.	387.00	_____
36 pr. Women's Patent Leather Pumps	15.25 per pr.	549.00	_____
72 pr. Children's Sandals	8.95 per pr.	644.40	_____
48 pr. Boys' Oxfords	5.50 per pr.	264.00	_____
Total		1,844.40	_____

(4)

36 pr. Women's Brown Oxfords	12.15 per pr.	437.40	_____
36 pr. Women's Pumps	11.95 per pr.	430.20	_____
36 pr. Misses' One Straps	11.45 per pr.	412.20	_____
72 pr. Children's Pumps	7.25 per pr.	522.00	_____
Total		1,795.80	_____

(5)

48 pr. Boys' Black Oxfords	10.50 per pr.	504.10	_____
36 pr. Girls' White Sandals	15.25 per pr.	549.00	_____
36 pr. Girls' Backless Pumps	7.75 per pr.	279.00	_____
72 pr. Children's Sandals	5.50 per pr.	396.00	_____
Total		1,773.10	_____

JOB No. 33 (Cont'd.)

TIMED DRILL

Inventory Bin #1
Linens

275.125 yds. @ 1.7525 per yd.
85.4625 yds. @ 2.255 per yd.
165.5 yds. @ 3.7525 per yd.
103.625 yds. @ 2.50 per yd.
325.875 yds. @ 4.2525 per yd.

50

Total _____

Inventory Bin #2
Silks

65.25 yds. @ 6.7525 per yd.
80.75 yds. @ 7.50 per yd.
7.125 yds. @ 8.0525 per yd.
45.625 yds. @ 12.255 per yd.
70.875 yds. @ 15.755 per yd.

95

Total _____

Inventory Bin #3
Acetates

105.875 yds. @ 3.6525 per yd.
62.1625 yds. @ 1.755 per yd.
125.5 yds. @ 4.8525 per yd.
307.625 yds. @ 3.25 per yd.
175.376 yds. @ 2.2575 per yd.

145

Total _____

Inventory Bin #4
Broadcloth

25.75 yds. @ 8.3575 per yd.
91.25 yds. @ 3.05 per yd.
3.375 yds. @ 5.7525 per yd.
81.875 yds. @ 10.755 per yd.
35.125 yds. @ 14.125 per yd.

190

Total _____

Inventory Bin #5
Woolens

150.125 yds. @ 4.8025 per yd.
51.1575 yds. @ 1.655 per yd.
236.5 yds. @ 3.1575 per yd.
163.875 yds. @ 5.50 per yd.
225.375 yds. @ 1.1625 per yd.

240

Total _____

Inventory Bin #6
Dacron

31.25 yds. @ 2.7525 per yd.
47.75 yds. @ 4.85 per yd.
7.333 yds. @ 4.8125 per yd.
65.625 yds. @ 13.667 per yd.
15.125 yds. @ 11.125 per yd.

285

Total _____

KEY-DRIVEN CALCULATOR

JOB No. 36 TOUCH ADDITION ASCENTS AND DE- SCENTS OF ONE	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
.33	.33	.44	.55	.33	.22	1
.44	.44	.33	.44	.22	.11	2
.33	.55	.34	.45	.23	.12	3
.44	.44	.44	.55	.33	.22	4
.55	.33	.33	.44	.22	.11	5
.44	.22	.34	.45	.23	.12	6
.33	.33	.44	.55	.33	.22	7
.22	.22	.33	.44	.22	.11	8
.11	.33	.34	.45	.23	.12	9
.22	.44	.55	.33	.33	.22	10
.33	.55	.33	.44	.22	.11	11
.44	.44	.34	.45	.23	.12	12
.55	.33	.44	.55	.33	.22	
.44	.22	.33	.44	.22	.11	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
.11	.33	.44	.33	.11	.55	
.12	.34	.55	.44	.22	.54	
.23	.45	.54	.43	.21	.44	
.34	.34	.44	.33	.11	.43	
.45	.23	.55	.44	.22	.33	
.44	.12	.54	.43	.21	.32	
.45	.11	.44	.33	.11	.22	
.34	.12	.55	.44	.22	.21	
.23	.23	.54	.43	.21	.11	
.12	.34	.44	.33	.11	.22	
.11	.45	.55	.44	.22	.21	
.12	.44	.54	.43	.21	.22	
.23	.45	.44	.33	.11	.33	
.34	.34	.55	.44	.22	.32	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 36 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)	Answers
.54	.32	.54	.45	.11	.43	13
.43	.21	.43	.54	.21	.23	14
.32	.22	.32	.43	.12	.32	15
.21	.32	.21	.32	.22	.21	16
.22	.43	.12	.21	.23	.12	17
.21	.54	.23	.12	.32	.22	18
.32	.55	.34	.23	.33	.23	
.43	.54	.45	.34	.34	.32	
.54	.43	.54	.45	.43	.34	
.43	.32	.43	.54	.44	.43	
.32	.21	.32	.43	.45	.45	
.21	.22	.21	.32	.54	.54	
.22	.32	.12	.21	.44	.45	
.32	.43	.23	.12	.43	.43	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
.22	.33	.33	.44	.55	.33	.54	.12	.32
.32	.43	.23	.34	.54	.43	.43	.21	.23
.33	.44	.22	.34	.44	.44	.32	.23	.33
.23	.34	.32	.43	.45	.34	.21	.32	.34
.22 ¹⁰	.33 ⁴⁰	.33 ⁷⁰	.44 ¹⁰⁰	.44 ¹³⁰	.43 ¹⁶⁰	.12 ¹⁹⁰	.34 ²²⁰	.43 ²⁵⁰
.32	.43	.23	.34	.54	.44	.23	.43	.44
.33	.44	.22	.33	.55	.34	.34	.45	.45
.23	.34	.32	.43	.45	.33	.45	.54	.54
.22	.33	.33	.44	.44	.43	.54	.43	.55
.33 ²⁰	.44 ⁵⁰	.22 ⁸⁰	.33 ¹¹⁰	.55 ¹⁴⁰	.44 ¹⁷⁰	.43 ²⁰⁰	.34 ²³⁰	.45 ²⁶⁰
.32	.43	.23	.34	.54	.34	.32	.32	.54
.23	.34	.32	.43	.45	.33	.21	.23	.43
.22	.33	.33	.44	.44	.43	.12	.21	.34
.32	.43	.23	.34	.54	.44	.21	.12	.33
.33 ³⁰	.44 ⁶⁰	.22 ⁹⁰	.34 ¹²⁰	.55 ¹⁵⁰	.34 ¹⁸⁰	.32 ²¹⁰	.11 ²⁴⁰	.32 ²⁷⁰
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

KEY-DRIVEN CALCULATOR

JOB No. 37 TOUCH ADDITION — TWO-KEY ASCENTS AND DESCENTS	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
.11	.33	.22	.23	.13	.45	1
.22	.32	.23	.24	.13	.55	2
.21	.31	.24	.24	.23	.54	3
.23	.11	.24	.44	.33	.53	4
.33	.12	.44	.45	.34	.54	5
.31	.13	.43	.42	.35	.33	6
.11	.33	.42	.42	.35	.32	7
.12	.44	.44	.22	.55	.31	8
.13	.43	.45	.23	.54	.34	9
.33	.32	.43	.24	.53	.35	10
.22	.31	.42	.44	.53	.35	11
.11	.11	.22	.45	.33	.45	12
.12	.12	.23	.43	.31	.44	
.13	.13	.24	.42	.32	.43	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
.12	.21	.13	.42	.53	.43	
.13	.22	.23	.24	.35	.35	
.31	.23	.33	.44	.54	.42	
.13	.24	.35	.21	.53	.21	
.31	.24	.54	.13	.33	.22	
.13	.44	.44	.31	.34	.24	
.31	.43	.32	.22	.32	.45	
.12	.42	.21	.24	.31	.54	
.24	.42	.12	.42	.13	.42	
.42	.45	.24	.23	.24	.23	
.24	.54	.35	.33	.35	.32	
.42	.43	.55	.24	.53	.24	
.44	.42	.54	.44	.53	.34	
.45	.42	.53	.45	.35	.35	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 37 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)
.44	.43	.53	.13	.13	.55
.43	.35	.24	.23	.12	.54
.32	.54	.53	.21	.31	.53
.23	.43	.31	.32	.21	.33
.21	.32	.12	.43	.24	.35
.13	.24	.23	.24	.23	.53
.12	.43	.34	.42	.42	.45
.13	.33	.45	.45	.32	.35
.22	.35	.53	.55	.35	.33
.24	.54	.32	.53	.43	.31
.43	.43	.31	.53	.53	.22
.32	.24	.13	.35	.34	.24
.22	.24	.24	.34	.54	.42
.21	.42	.35	.44	.45	.42
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Answers

13	
14	
15	
16	
17	
18	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
.11	.12	.21	.23	.24	.32	.11	.22
.12	.21	.43	.32	.42	.42	.13	.24
.22	.23	.24	.23	.42	.24	.22	.42
.23	.32	.32	.21	.43	.23	.24	.35
.33 ¹⁰	.43 ⁴⁰	.54 ⁷⁰	.12 ¹⁰⁰	.35 ¹³⁰	.35 ¹⁶⁰	.44 ¹⁹⁰	.53 ²²⁰
.34	.34	.31	.23	.35	.53	.42	.32
.44	.54	.42	.34	.54	.33	.22	.31
.45	.45	.24	.45	.43	.34	.24	.13
.55	.43	.42	.54	.33	.42	.45	.13
.54 ²⁰	.31 ⁵⁰	.31 ⁸⁰	.43 ¹¹⁰	.32 ¹⁴⁰	.24 ¹⁷⁰	.54 ²⁰⁰	.33 ²³⁰
.44	.24	.23	.34	.21	.24	.53	.35
.43	.42	.42	.45	.12	.43	.53	.53
.33	.35	.34	.44	.13	.54	.35	.54
.32	.53	.53	.54	.24	.53	.54	.42
.31 ³⁰	.54 ⁶⁰	.35 ⁹⁰	.53 ¹²⁰	.42 ¹⁵⁰	.35 ¹⁸⁰	.45 ²¹⁰	.24 ²⁴⁰
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

KEY-DRIVEN CALCULATOR

JOB NO. 38 TOUCH ADDITION OF 6's, 7's, 8's, 9's, and 0's	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
.33	.60	.44	.77	.06	.07	1
.06	.06	.33	.73	.60	.70	2
.33	.66	.34	.37	.33	.44	3
.60	.33	.07	.77	.36	.46	4
.33	.36	.70	.37	.63	.47	5
.66	.66	.77	.73	.07	.74	6
.30	.60	.33	.77	.70	.77	7
.33	.63	.34	.44	.73	.66	8
.06	.33	.07	.33	.76	.64	9
.33	.36	.70	.73	.67	.46	10
.60	.63	.77	.37	.63	.74	11
.33	.06	.70	.47	.73	.47	12
.66	.60	.07	.74	.73	.77	
.06	.66	.77	.77	.63	.66	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
.44	.48	.60	.55	.44	.55	
.80	.84	.66	.90	.90	.44	
.08	.40	.67	.09	.09	.99	
.44	.08	.70	.59	.49	.95	
.48	.80	.76	.95	.94	.59	
.48	.84	.80	.99	.99	.49	
.84	.48	.68	.59	.49	.94	
.84	.88	.86	.95	.94	.99	
.80	.80	.67	.99	.99	.59	
.84	.08	.76	.90	.90	.49	
.48	.44	.68	.09	.09	.95	
.08	.88	.78	.59	.59	.94	
.44	.48	.80	.95	.95	.99	
.48	.84	.60	.99	.99	.59	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 38 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)	Answers
.67	.60	.70	.34	.23	.42	13
.76	.67	.68	.55	.31	.44	14
.66	.70	.86	.45	.22	.48	15
.68	.78	.80	.54	.24	.47	16
.86	.80	.79	.90	.48	.84	17
.88	.89	.97	.09	.84	.74	18
.89	.90	.90	.96	.45	.36	
.98	.98	.69	.33	.89	.63	
.90	.89	.96	.60	.88	.67	
.09	.87	.79	.06	.87	.76	
.80	.70	.07	.67	.86	.78	
.08	.86	.68	.70	.74	.87	
.70	.68	.86	.07	.73	.68	
.07	.87	.08	.67	.77	.86	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
.34	.40	.12	.43	.54	.30	.67	.98
.48	.48	.13	.12	.43	.60	.88	.40
.30	.54	.30	.22	.21	.64	.78	.66
.40	.80	.16	.23	.22	.06	.99	.80
.26 ¹⁰	.36 ⁴⁰	.34 ⁷⁰	.24 ¹⁰⁰	.23 ¹³⁰	.35 ¹⁶⁰	.68 ²¹⁵	.67 ²⁶⁵
.42	.24	.37	.30	.26	.79	.67	.30
.20	.40	.30	.48	.30	.50	.98	.68
.26	.36	.03	.50	.46	.88	.68	.89
.12	.35	.67	.54	.40	.60	.76	.07
.32 ²⁰	.32 ⁵⁰	.30 ⁸⁰	.63 ¹¹⁰	.45 ¹⁴⁰	.67 ¹⁷⁵	.89 ²³⁵	.69 ²⁸⁰
.13	.94	.31	.31	.90	.89	.79	.86
.31	.40	.13	.03	.40	.78	.50	.67
.13	.45	.35	.65	.35	.68	.88	.78
.23	.54	.54	.50	.45	.96	.60	.89
.31 ³⁰	.42 ⁶⁰	.44 ⁹⁰	.59 ¹²⁰	.95 ¹⁵⁰	.79 ¹⁸⁵	.67 ²⁵⁰	.98 ³⁰⁰
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

KEY-DRIVEN CALCULATOR

JOB No. 39 TOUCH ADDITION OF THREE-DIGIT NUMBERS	Name _____ Period _____ Date _____	No. of Errors _____ GSPM _____ Rating _____
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(1)	(2)	(3)	(4)	(5)	(6)
3.33	2.23	3.30	4.44	3.34	3.48
3.34	3.34	3.34	4.55	4.45	8.44
4.44	4.45	4.40	5.55	5.54	9.43
4.45	5.55	4.45	5.44	5.40	6.34
5.55	5.54	5.50	4.33	4.80	7.32
5.54	4.43	5.54	3.22	5.90	3.48
4.44	3.32	4.04	2.11	4.70	8.45
4.43	2.22	4.43	1.11	3.63	8.43
3.33	1.11	3.03	1.22	3.23	3.48
3.32	1.21	3.32	2.33	3.44	9.43
2.22	2.23	2.02	3.44	4.76	6.34
2.21	3.34	2.21	4.55	3.03	7.32
1.11	4.45	1.01	5.44	2.11	2.34
<u>1.12</u>	<u>5.54</u>	<u>1.11</u>	<u>4.33</u>	<u>1.01</u>	<u>1.23</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
(7)	(8)	(9)	(10)	(11)	(12)
9.43	2.46	3.98	4.26	5.50	6.68
6.34	6.78	4.32	3.54	5.04	7.78
7.32	3.94	2.45	4.87	4.80	8.89
3.48	4.58	9.84	3.12	4.08	9.98
6.34	4.32	4.33	4.53	3.60	8.87
7.32	4.85	3.54	5.48	3.06	7.76
3.48	3.94	2.45	4.35	2.70	6.65
8.45	6.78	5.59	2.35	2.07	5.54
3.48	3.12	4.23	3.64	1.30	4.43
7.32	2.63	3.54	4.53	1.03	3.32
6.34	4.72	4.62	5.48	6.60	2.21
8.45	3.54	2.67	1.35	6.06	1.12
4.36	2.46	1.24	2.34	7.70	2.23
<u>3.48</u>	<u>3.49</u>	<u>4.68</u>	<u>3.54</u>	<u>7.07</u>	<u>3.34</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Answers

1	
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10	
11	
12	

JOB No. 39 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)
.42	2.23	.34	5.99	7.38	6.34
3.06	.31	.56	4.34	6.89	2.24
4.98	.22	2.24	3.67	5.50	3.66
7.39	2.36	3.35	6.78	6.46	3.35
.48	.24	.67	8.45	3.66	5.45
.67	4.33	3.21	9.54	7.34	9.47
4.70	.31	1.23	.45	3.37	8.35
2.22	3.43	.12	.58	4.16	5.92
2.06	.45	.31	8.33	8.42	2.24
.67	2.02	3.23	2.34	2.34	2.28
.78	.36	3.04	.87	5.31	5.05
3.71	4.05	.42	3.04	8.63	4.49
3.04	.87	.67	4.08	4.89	9.98
8.53	.74	4.73	.43	8.55	8.68

Answers	
13	
14	
15	
16	
17	
18	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4.04	3.37	.75	5.52	1.23	.65	5.72	1.35
5.03	6.67	.54	4.42	3.21	.42	6.42	5.45
3.03	4.48	.34	.48	1.23	.34	2.61	4.53
4.02	8.84	9.04	.84	3.21	6.05	5.99	3.54
3.05 ¹⁰	5.59	.21	.42	5.43 ²⁰⁵	.34	4.24 ³¹⁵	4.23 ³⁷⁰
2.04	9.95	4.06	.24	3.45	5.07	4.32	3.54
4.02	4.02 ⁶⁰	5.78 ¹¹⁰	4.65 ¹⁶⁰	9.69	4.69 ²⁶⁵	2.86	4.53
5.03	7.73	6.89	5.13	4.49	7.68	3.24	3.12
3.01	3.77	.45	4.22	6.56	.35	6.34	2.35
4.02 ²⁰	2.28	.58	2.24	3.20 ²²⁵	.59	4.83 ³³⁵	4.53 ³⁸⁵
5.03	8.22	.40	6.08	6.78	.30	3.43	5.45
2.04	2.20	4.77	8.90	3.72	5.88	5.52	3.35
4.40	1.12	.68	5.48	7.34	.79	4.66	4.45
5.50	2.44	1.32	6.78	8.43	3.21	8.98	3.42
3.30 ⁸⁰	3.63 ⁹⁰	6.78 ¹⁴⁰	2.32 ¹⁹⁰	3.40 ²⁴⁵	8.67 ²⁹⁵	2.60 ³⁵⁵	2.12 ⁴⁰⁰

KEY-DRIVEN CALCULATOR

JOB No. 40

MULTIPLICATION

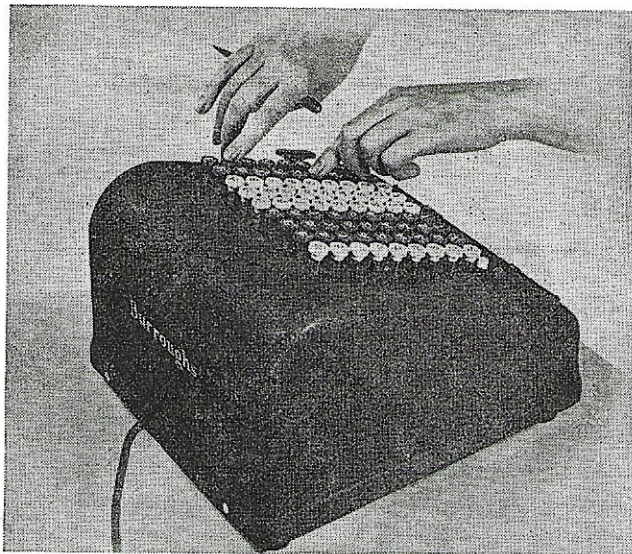
Name _____

Period _____ Date _____

No. of Errors _____

GSPM _____

Rating _____



Striking 48 in Multiplication

Answers

1	
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11	
12	
13	
14	

(1) 48×23 _____

(2) 68×35 _____

(3) 35×19 _____

(4) 15×47 _____

(5) 26×64 _____

(6) 73×58 _____

(7) 47×4 _____

(8) 62×5 _____

(9) 87×27 _____

(10) 29×53 _____

(11) 48×67 _____

(12) 52×36 _____

(13) 53×42 _____

(14) 19×7 _____

JOB No. 40 (Cont'd.)

- (15) 45×32 _____
 (16) 34×25 _____
 (17) 56×34 _____
 (18) 75×46 _____
 (19) 79×23 _____
 (20) 64×55 _____
 (21) 19×18 _____
 (22) 35×14 _____
- (23) $.85 \times .24$ _____
 (24) $.47 \times 7.3$ _____
 (25) $.65 \times 87$ _____
 (26) $.54 \times 3.2$ _____
 (27) 21×56 _____
 (28) 23×5.4 _____
 (29) $6.7 \times .98$ _____
 (30) $.56 \times .43$ _____

Answers

15		23	
16		24	
17		25	
18		26	
19		27	
20		28	
21		29	
22		30	

TIMED DRILL

- | | | | | | |
|-------------------|-------------------|---------------------|---------------------|----------------------------|-------|
| (1) .94 | (2) .65 | (3) 6.43 | (4) 9.34 | (5) $26 \times .47$ | _____ |
| .50 | .30 | 2.39 | 7.80 | (6) 41×34 | _____ |
| .36 | .47 | 7.50 | 3.74 | (7) 37×52^{230} | _____ |
| .75 ¹⁰ | .65 ⁵⁰ | 2.48 ⁹⁵ | 5.90 ¹⁵⁵ | (8) 67×35 | _____ |
| .89 | .98 | 9.63 | 7.84 | (9) 76×7 | _____ |
| .07 | .09 | 1.22 | 8.75 | (10) 78×91^{255} | _____ |
| .45 | .53 | 8.37 | 3.98 ¹⁷⁰ | (11) $.46 \times 2.3$ | _____ |
| .80 ²⁰ | .70 ⁶⁰ | 4.04 ¹¹⁰ | 2.24 | (12) $3.1 \times .56$ | _____ |
| .79 | .76 | 8.75 | 4.80 | (13) 37×4.5^{280} | _____ |
| .50 | .40 | 3.49 | 5.85 | (14) $9.2 \times .67$ | _____ |
| .40 | .20 | 4.45 | 8.46 ¹⁸⁵ | (15) $65 \times .7^{300}$ | _____ |
| .79 ³⁰ | .88 ⁷⁰ | 1.12 ¹²⁵ | 4.42 | | |
| .65 | .73 | 4.75 | 8.98 | | |
| .98 | .96 | 7.88 | 9.79 | | |
| .63 ⁴⁰ | .85 ⁸⁰ | 6.27 ¹⁴⁰ | 6.16 ²⁰⁵ | | |
| _____ | _____ | _____ | _____ | | |
| _____ | _____ | _____ | _____ | | |
| _____ | _____ | _____ | _____ | | |

KEY-DRIVEN CALCULATOR

JOB No. 41 TOUCH ADDITION— THREE KEY ASCENTS & DESCENTS	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
.11	.22	.22	.55	.11	.44	1
.33	.44	.55	.22	.44	.41	2
.22	.22	.22	.55	.11	.44	3
.44	.55	.55	.22	.44	.41	4
.55	.22	.25	.52	.11	.44	5
.33	.33	.22	.55	.44	.41	6
.22	.22	.55	.52	.14	.31	7
.44	.44	.25	.55	.44	.41	8
.33	.22	.22	.42	.14	.33	9
.11	.55	.55	.52	.33	.41	10
.22	.22	.25	.55	.14	.15	11
.44	.55	.55	.32	.22	.41	12
.55	.22	.22	.52	.14	.33	
.33	.55	.25	.42	.55	.41	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
.22	.14	.22	.22	.22	.22	
.25	.25	.55	.25	.52	.25	
.52	.52	.99	.29	.92	.29	
.11	.41	.11	.11	.11	.52	
.14	.14	.22	.14	.41	.92	
.41	.25	.55	.18	.81	.11	
.22	.52	.99	.22	.22	.14	
.25	.41	.11	.25	.52	.18	
.52	.14	.22	.29	.92	.41	
.11	.25	.55	.11	.11	.81	
.14	.52	.99	.14	.41	.22	
.41	.41	.11	.18	.81	.25	
.25	.14	.22	.22	.22	.29	
.52	.25	.55	.25	.52	.52	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 41 (Cont'd.)

(13)	(14)	(15)	(16)	(17)	(18)	Answers
4.35	.61	1.23	.23	4.53	2.32	13
8.63	2.25	.45	.44	2.14	6.81	14
.52	5.48	.96	5.83	.32	5.93	15
2.01	7.03	3.52	.41	.49	.65	16
.49	.41	1.14	.12	7.03	.20	17
.41	3.49	.25	.14	.46	8.31	18
6.42	.52	5.93	.55	3.25	.54	
.28	.20	.73	2.06	.93	.32	
5.92	3.81	.48	6.14	.58	.41	
.14	.26	4.52	.57	.37	3.07	
7.08	.93	.13	.49	2.10	.22	
.41	2.25	.14	.14	8.41	.25	
6.04	.54	.22	3.81	.14	1.13	
.52	.41	.25	.41	9.41	.14	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
.12	.83	.25	.25	.84	2.23	4.81	8.71
.27	.42	.49	.52	.81	2.25	4.41	6.12
.93	.22	.36	.41	.18	.42	3.52	2.45
.55 ¹⁰	.37 ⁴⁵	.24 ⁸⁵	.14	.95	4.41	3.25	3.61
.45	.65	.53	.42 ¹²⁰	.91 ¹⁵⁵	6.32 ²⁰⁰	.32 ²⁴⁰	6.14 ²⁸⁵
.13	.44	.24	.31	.19	.40	.25	7.69
.21	.31	.63	.41	.84	.14	1.25	3.61
.47	.28 ⁵⁵	.48 ⁹⁵	.14	.81	.25	1.52	4.03
.20 ²⁰	.97	.54	.25	.18	2.52	.45 ²⁵⁰	5.81
.32	.23	.43	.52 ¹³⁰	.95 ¹⁷⁰	.32 ²¹⁰	.83	9.80 ³⁰⁵
.85	.69	.32	.44	.91	.41	.12	6.09
.12	.55	.38	.41	.84	6.55	.41	8.82
.35	.71	.45	.52	.81	5.52	3.04	2.83
.86	.11	.34	.25	.18	1.25	.52	9.30
.34 ³⁵	.38 ⁷⁵	.12 ¹¹⁰	.14 ¹⁴⁰	.19 ¹⁸⁵	1.14 ²²⁵	2.61 ²⁶⁵	6.32 ³²⁵
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

KEY-DRIVEN CALCULATOR

JOB No. 42 SUBTRACTION	Name _____	No. of Errors _____
	Period _____ Date _____	GSPM _____
		Rating _____

(1)	(2)	(3)	(4)
7.35 -2.08 _____	5.47 -3.85 _____	6.21 -4.06 _____	4.55 -2.24 _____
_____	_____	_____	_____
_____	_____	_____	_____
(5)	(6)	(7)	(8)
7.33 -4.54 _____	5.44 -2.04 _____	4.26 -2.38 _____	6.35 -3.05 _____
_____	_____	_____	_____
_____	_____	_____	_____
(9)	(10)	(11)	(12)
9.87 -1.02 _____	7.67 -2.86 _____	5.20 -2.09 _____	4.10 -1.81 _____
_____	_____	_____	_____
_____	_____	_____	_____
(13)	(14)	(15)	(16)
9.20 -1.25 _____	5.20 -3.05 _____	8.10 -7.45 _____	6.14 -1.13 _____
_____	_____	_____	_____
_____	_____	_____	_____

Answers	
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12	_____
13	_____
14	_____
15	_____
16	_____

JOB No. 42 (Cont'd.)

(17)	(18)	(19)	(20)	Answers	
4.52	3.81	6.42	5.92	17	
<u>-2.12</u>	<u>-1.15</u>	<u>-4.52</u>	<u>-2.25</u>	18	
				19	
				20	
				21	
				22	
(21)	(22)	(23)	(24)	23	
6.76	5.98	5.47	9.35	24	
<u>-3.82</u>	<u>-4.07</u>	<u>-4.23</u>	<u>-7.02</u>	25	
				26	
				27	
				28	
(25)	(26)	(27)	(28)	29	
6.28	4.56	8.55	3.89	30	
<u>-2.47</u>	<u>-3.02</u>	<u>-5.32</u>	<u>-2.06</u>	31	
				32	
(29)	(30)	(31)	(32)		
5.94	4.76	9.36	8.46		
<u>-3.66</u>	<u>-3.12</u>	<u>-5.08</u>	<u>-6.15</u>		

JOB No. 42 (Cont'd.)

(33)	(34)	(35)	(36)	Answers
6.76	5.98	5.47	9.35	33
<u>-3.82</u>	<u>-4.27</u>	<u>-4.23</u>	<u>-7.62</u>	34
<u> </u>	<u> </u>	<u> </u>	<u> </u>	35
<u> </u>	<u> </u>	<u> </u>	<u> </u>	36
				37
(37)	(38)	(39)	(40)	38
6.28	4.56	8.55	3.89	39
<u>-2.07</u>	<u>-3.22</u>	<u>-5.32</u>	<u>-2.06</u>	40
<u> </u>	<u> </u>	<u> </u>	<u> </u>	41
<u> </u>	<u> </u>	<u> </u>	<u> </u>	42
				43
(41)	(42)	(43)	(44)	44
5.94	4.76	9.36	8.46	45
<u>-3.66</u>	<u>-3.12</u>	<u>-5.87</u>	<u>-6.15</u>	46
<u> </u>	<u> </u>	<u> </u>	<u> </u>	47
<u> </u>	<u> </u>	<u> </u>	<u> </u>	48
(45)	(46)	(47)	(48)	
6.38	4.73	4.90	6.75	
<u>-5.22</u>	<u>-3.82</u>	<u>-1.24</u>	<u>-4.03</u>	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	

JOB No. 42 (Cont'd.)

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)
2.04	.78	2.33	3.24	2.32	.52
8.30	.98	.34	.82	.14	3.04
.27	4.04 ⁵⁵	4.05	.32	6.81 ²⁰⁰	.41
.31	3.22	5.99	5.89	5.93	2.61 ²⁴⁵
1.01	1.20	1.42 ¹¹⁰	.54 ¹⁵⁵	1.13	.12
2.35	.32	2.20	3.73	.65	.83
3.72	.13	3.00	1.02	.20	.45
2.45	.31	7.32	.35	8.31 ²¹⁵	1.52 ²⁵⁵
4.53 ²⁵	6.12 ⁷⁰	2.45 ¹²⁰	2.87	.25	1.25
3.24	6.35	4.70	1.36	.22	.25
.82	3.67	3.60	.73 ¹⁷⁵	3.07	.32
.35	6.00	5.84	.58	.41	3.25
5.34	9.36	4.05	6.07	6.32	3.52
8.45	5.87	6.72	8.34	4.54	4.41
4.86 ⁴⁵	8.06 ⁹⁵	4.11 ¹⁴⁰	1.46 ¹⁹⁰	.68 ²³⁵	4.81 ²⁷⁵
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

(7) $.46 \times 3.4$

(9) $.35 \times .26$

(8) $.82 \times 44^{290}$

(10) 7.1×4.3^{305}

(11)	(12)	(13)	(14)	(15)
6.78	3.43	4.57	7.32	4.51
-5.06 ³¹⁵	-1.76	-2.28 ³³⁰	-2.76	-2.85 ³⁴⁵
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

KEY-DRIVEN CALCULATOR

JOB No. 43 TOUCH ADDITION — LONGER REACHES	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)	(2)	(3)	(4)	(5)	(6)	Answers
.11	.11	.15	.33	.33	.11	1
.33	.55	.51	.24	.42	.13	2
.22	.11	.15	.15	.51	.15	3
.55	.55	.51	.25	.41	.55	4
.11	.33	.31	.33	.55	.53	5
.55	.11	.13	.24	.42	.51	6
.11	.55	.15	.15	.51	.11	7
.55	.22	.51	.25	.41	.13	8
.33	.55	.21	.33	.33	.15	9
.11	.11	.12	.24	.42	.55	10
.55	.55	.15	.15	.51	.53	11
.11	.11	.51	.44	.41	.51	12
.33	.55	.15	.24	.22	.11	
.55	.11	.51	.15	.51	.13	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
(7)	(8)	(9)	(10)	(11)	(12)	
.42	.69	.48	9.32	.24	6.79	
.15	.31	.21	.81	5.58	4.75	
.21	.25	.24	6.42	.71	.41	
.45	.10	.80	.15	.15	4.86	
.32	.36	.15	1.26	6.92	.09	
.81	.48	.42	.90	.60	8.58	
.26	.02	.51	7.62	.51	.65	
.51	.15	.13	.21	1.43	7.08	
.90	.83	.46	.45	2.80	9.17	
.62	.51	.89	.51	.72	2.68	
.15	.24	.21	.25	.11	.74	
.25	.37	.15	5.42	1.15	.31	
.42	.25	.24	.15	.51	4.75	
.51	.15	.25	.51	.25	.51	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

JOB No. 43 (Cont'd.)

SUPPLEMENTARY WORK

Answers

(13) 346×78 _____	(20) 6.23	(21) 5.06
(14) 624×35 _____	<u>-4.87</u>	<u>-2.03</u>
(15) 554×68 _____	_____	_____
(16) $37.5 \times .46$ _____	_____	_____
(17) $.597 \times 1.4$ _____	(22) 7.43	(23) 4.62
(18) 643×3.05 _____	<u>-3.81</u>	<u>-1.35</u>
(19) $9.37 \times .42$ _____	_____	_____
	_____	_____

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23	

TIMED DRILL

(1) .57	(2) 2.49	(3) 9.31	(4) 268×37 _____		
.31	.86	.54	(5) 554×46^{145} _____		
.25	.42	4.57	(6) $.698 \times 62$ _____		
.15	7.74	6.31	(7) 85.6×43 _____		
.31	2.08	.73	(8) 1.35×73^{170} _____		
.54	.45 ⁵⁵	3.42 ¹⁰⁰	(9) 123×14 _____		
.73	.29	.13	(10) 6.68	(11) 8.78	(12) 5.25
.42	.62	.25	<u>-3.78¹⁸⁵</u>	<u>-6.73</u>	<u>-1.38</u>
.13 ²⁰	9.12	.15	_____	_____	_____
.15	8.43	8.73	_____	_____	_____
.51	8.30	.42	_____	_____	_____
.42	.10	.51	_____	_____	_____
.37	1.25	2.30	(13) 7.54	(14) 4.41	(15) 8.43
.92	.51	4.92	<u>-2.06²¹⁰</u>	<u>-1.07</u>	<u>-7.65²²⁵</u>
<u>.56³⁵</u>	<u>.15⁸⁰</u>	<u>6.51¹²⁵</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

KEY-DRIVEN CALCULATOR

JOB No. 44 DIVISION	Name _____	No. of Errors _____
	Period _____ Date _____	GSPM _____ Rating _____

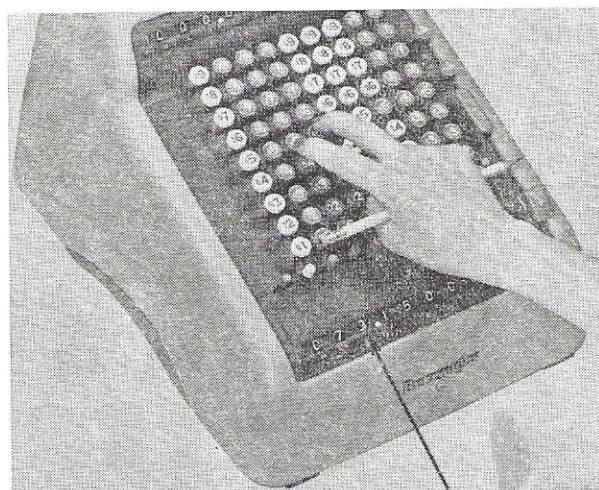
To divide, you should:

1. Use the touch method to add the dividend at the extreme left of the machine.
2. Place a decimal marker at the right of the dividend and move it one place to the **left** for every **whole number** in the divisor.
3. Reduce the remainder — strike the **small figures** for the divisor **less one** until the number in the dials directly below the columns on which fingers are placed is **smaller than** the divisor.
4. Move one column to the right. Repeat Step 3.
5. Prove the accuracy of the answer by multiplying it by the divisor to get the dividend.

- | | |
|---------------------|---------------------|
| (1) 1808 ÷ 16 _____ | (7) 645 ÷ 15 _____ |
| (2) 1728 ÷ 12 _____ | (8) 575 ÷ 25 _____ |
| (3) 1862 ÷ 14 _____ | (9) 312 ÷ 24 _____ |
| (4) 4773 ÷ 43 _____ | (10) 144 ÷ 12 _____ |
| (5) 1521 ÷ 13 _____ | (11) 451 ÷ 11 _____ |
| (6) 2938 ÷ 26 _____ | (12) 583 ÷ 53 _____ |

Answers

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Dividing on a Key-Driven Calculator

JOB No. 44 (Cont'd.)

(13) $72 \div 24$ _____	(19) $7632 \div 36$ _____	Answers
(14) $76 \div 19$ _____	(20) $8988 \div 28$ _____	13
(15) $92 \div 23$ _____	(21) $8862 \div 42$ _____	14
(16) $372 \div 12$ _____	(22) $9951 \div 31$ _____	15
(17) $529 \div 23$ _____	(23) $1860 \div 15$ _____	16
(18) $954 \div 18$ _____	(24) $9540 \div 45$ _____	17
		18
		19
		20
		21
		22
		23
		24

TIMED DRILL

(1)	(2)	(3)	(4) $6.8 \times .26$ _____	(6)	(7)	(8)
.42	.46	8.67		936	7.26	6.78
.51	3.24	.34	(5) $36 \times .75$ ¹³⁵ _____	-278 ¹⁴⁴	-2.68	-1.07 ¹⁶³
.65	8.55	.10				
.15	.20	5.20				
.93	4.71 ⁵⁰	.65				
.21	2.54	5.93				
.10 ¹⁵	.23	.24 ⁹⁵				
.34	5.72	3.45				
.67	.50 ⁶⁰	.51				
.24	.13	5.71				
.45	1.58	2.03	(9) $351 \div 27$ _____			
.71	5.22	.22				
.83	.13	.52	(10) $735 \div 35$ ¹⁷⁷ _____			
.22	.51	.25				
.51 ³⁵	.15 ⁷⁵	1.51 ¹¹⁵	(11) $924 \div 28$ _____			
_____	_____	_____	(12) $3122 \div 14$ ¹⁹⁸ _____			
_____	_____	_____	(13) $1.76 + 8.16 + 2.97 + 8.76$ _____			
			(14) $8.27 + 9.27 + 3.68 + 6.97$ ²⁴⁰ _____			

KEY-DRIVEN CALCULATOR

JOB No. 45 MULTIPLICATION — THREE- AND FOUR- FIGURE COMBINA- TIONS	Name _____	No. of Errors _____
	Period _____ Date _____	GSPM _____
		Rating _____

THE NATURAL FINGERING COMBINATIONS

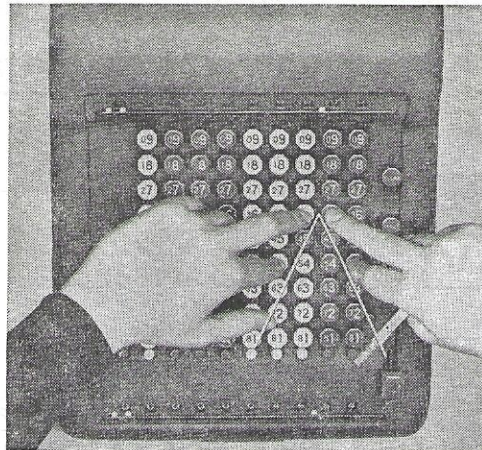
- | | |
|----------------------|----------------------|
| (1) 535 × 656 _____ | (6) 412 × 813 _____ |
| (2) 424 × 535 _____ | (7) 267 × 612 _____ |
| (3) 413 × 757 _____ | (8) 157 × 861 _____ |
| (4) 212 × 858 _____ | (9) 257 × 213 _____ |
| (5) 545 × 423 _____ | (10) 713 × 414 _____ |
| | |
| (11) 7557 × 45 _____ | (16) 5257 × 63 _____ |
| (12) 4224 × 83 _____ | (17) 8668 × 74 _____ |
| (13) 5225 × 74 _____ | (18) 6457 × 86 _____ |
| (14) 2112 × 36 _____ | (19) 7546 × 36 _____ |
| (15) 6424 × 34 _____ | (20) 6545 × 52 _____ |

Answers

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The Natural Fingering Position



The Inverted Fingering Position

- In the inverted fingering technique, the same rule is followed in placing the fingers on keys that was used for the natural fingering technique — the longer fingers are used for the higher figures. However, the figure combinations for which the inverted position of fingers is used have the lower figures in the outer columns (1 and 4, from the right) instead of the inner columns (2 and 3) as in the natural finger position. This necessitates turning the hands outward and raising the elbows slightly. Problems 21 to 30 will give you practice in using the inverted fingering technique.

(21) $5,775 \times 53$ _____

(22) $2,475 \times 74$ _____

(23) $2,675 \times 87$ _____

(24) $6,731 \times 66$ _____

(25) $3,543 \times 85$ _____

(26) $6,754 \times 55$ _____

(27) $8,976 \times 36$ _____

(28) $3,531 \times 48$ _____

(29) $5,775 \times 54$ _____

(30) $2,332 \times 43$ _____

TIMED DRILL

(1)	(2)	(3)
.24	3.62	.82
.97	2.10	2.34
.52	.25	6.31
.13	.83	.25
.51	4.71 ⁵⁰	1.51 ⁹⁵
.14	.24	.90
.62	.97	5.93
.10	6.02	7.22
.25 ²⁰	.22	1.01
.83	7.13 ⁶⁵	2.45 ¹¹⁰
.71	.52	.53
.22	.14	3.31
.43	7.15	6.24
.31	3.25	1.15
.57 ³⁵	6.51 ⁸⁰	1.25 ¹²⁵

(4) 835×536 _____

(5) $7,534 \times 24$ _____

(6) $1,375 \times 28$ ¹⁵⁵ _____

(7)	(8)	(9)
768	825	976
-382	-478	-145 ¹⁸³

(10) $864 \div 27$ _____ (12) $896 \div 28$ _____
(11) $720 \div 16$ ²⁰⁵ _____ (13) $391 \div 17$ ²²⁵ _____

(14) $8.26 + 4.68 + 5.97 + 1.86$ _____
 (15) $7.28 + 6.39 + 8.61 + 7.18$ 265

(114)

KEY-DRIVEN CALCULATOR

JOB NO. 46

**MULTIPLICATION —
INTERPOSED AND
CROSS HAND
FINGERING**

Name _____

Period _____ Date _____

No. of Errors _____

GSPM _____

Rating _____

INTERPOSED FINGERING COMBINATIONS

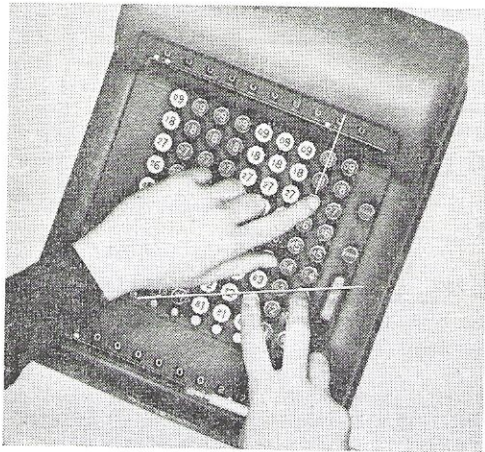
- | | |
|----------------------|-----------------------|
| (1) 2,836 × 82 _____ | (6) 3,517 × 72 _____ |
| (2) 7,162 × 24 _____ | (7) 8,283 × 12 _____ |
| (3) 1,736 × 76 _____ | (8) 8,162 × 62 _____ |
| (4) 6,253 × 28 _____ | (9) 4,728 × 46 _____ |
| (5) 475 × 73 _____ | (10) 7,253 × 52 _____ |

CROSS HAND FINGERING COMBINATIONS

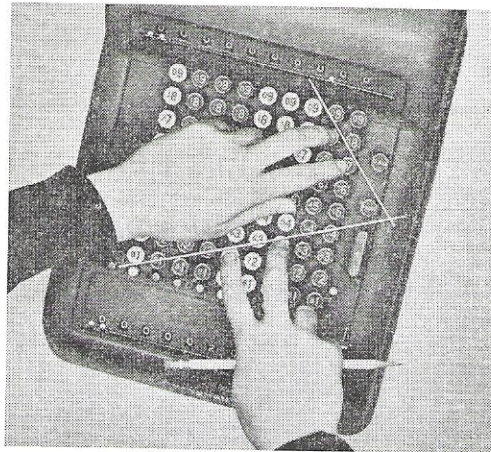
- | | |
|-----------------------|-----------------------|
| (11) 1,375 × 57 _____ | (16) 3,575 × 53 _____ |
| (12) 6,843 × 29 _____ | (17) 2,365 × 67 _____ |
| (13) 5,821 × 41 _____ | (18) 1,353 × 52 _____ |
| (14) 7,831 × 21 _____ | (19) 1,465 × 38 _____ |
| (15) 1,386 × 29 _____ | (20) 3,598 × 53 _____ |

Answers

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The Interposed Fingering Position



The Cross Hand Fingering Position

JOB No. 46 (Cont'd.)

Drill on all Multiplication Combinations presented thus far, including decimals and zeros:

- (21) 80.9×24 _____ (26) 4.03×20.4 _____
 (22) $6,434 \times .45$ _____ (27) $42.68 \times .87$ _____
 (23) 254.3×3.1 _____ (28) $5,776 \times 4.6$ _____
 (24) 1.486×70 _____ (29) $7,842 \times .24$ _____
 (25) 817.3×6.4 _____ (30) 183.9×40 _____

Answers

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TIMED DRILL

- | | | | |
|--------------------|--------------------|---------------------|--|
| (1) .24 | (2) 9.34 | (3) 5.94 | (4) $5,324 \times 57$ _____ |
| 8.07 | .76 | 7.02 | (5) $2,442 \times 35$ ¹⁴⁵ _____ |
| .22 | 3.31 | 1.21 | (6) $3,587 \times 46$ _____ |
| .35 | .41 | .45 | (7) $2,947 \times 23$ _____ |
| .41 | .25 ⁵⁵ | .82 ¹⁰⁰ | (8) 23.5×4.06 ¹⁷⁰ _____ |
| 2.34 ¹⁵ | .54 | 2.34 | (9) $576 \div 24$ _____ |
| .55 | 7.86 | 6.31 | (10) $832 \div 13$ ¹⁹⁵ _____ |
| .90 | 6.02 | .25 | (11) $266 \div 19$ _____ |
| 1.13 | .24 | .90 | (12) $598 \div 26$ ²¹⁵ _____ |
| .54 | .31 ⁷⁰ | .53 | (13) $4.86 + 5.97 + 6.17$ _____ |
| 3.60 | .14 | 3.30 ¹¹⁵ | (14) $8.27 + 9.36 + 1.68$ _____ |
| .92 ³⁰ | 4.05 | .24 | (15) $3.98 + 8.17 + 3.97$ ²⁶⁰ _____ |
| 8.51 | 3.24 | 5.60 | |
| 1.25 | 4.42 | 1.51 | |
| 1.15 ⁴⁰ | 5.87 ⁸⁵ | .25 ¹²⁵ | |
| _____ | _____ | _____ | |
| _____ | _____ | _____ | |

KEY-DRIVEN CALCULATOR

JOB No. 47 TRIAL-DIVISOR DIVISION	Name _____	No. of Errors _____
	Period _____ Date _____	GSPM _____
		Rating _____

(1) 1,824 ÷ 24 _____	(13) 4,332 ÷ 722 _____	Answers <table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> <tr><td>6</td></tr> <tr><td>7</td></tr> <tr><td>8</td></tr> <tr><td>9</td></tr> <tr><td>10</td></tr> <tr><td>11</td></tr> <tr><td>12</td></tr> <tr><td>13</td></tr> <tr><td>14</td></tr> <tr><td>15</td></tr> <tr><td>16</td></tr> <tr><td>17</td></tr> <tr><td>18</td></tr> <tr><td>19</td></tr> <tr><td>20</td></tr> <tr><td>21</td></tr> <tr><td>22</td></tr> <tr><td>23</td></tr> <tr><td>24</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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24																										
(2) 2,448 ÷ 34 _____	(14) 3,736 ÷ 467 _____																									
(3) 2,144 ÷ 67 _____	(15) 2,415 ÷ 345 _____																									
(4) 8,675 ÷ 25 _____	(16) 4,887 ÷ 543 _____																									
(5) 1,809 ÷ 67 _____	(17) 5,056 ÷ 632 _____																									
(6) 2,128 ÷ 38 _____	(18) 2,632 ÷ 376 _____																									
(7) 2,652 ÷ 34 _____	(19) 1,015 ÷ 145 _____																									
(8) 2,613 ÷ 67 _____	(20) 4,944 ÷ 824 _____																									
(9) 2,028 ÷ 78 _____	(21) 5,187 ÷ 741 _____																									
(10) 1,344 ÷ 28 _____	(22) 2,436 ÷ 348 _____																									
(11) 1,960 ÷ 35 _____	(23) 4,216 ÷ 527 _____																									
(12) 3,485 ÷ 85 _____	(24) 3,888 ÷ 648 _____																									

JOB No. 47 (Cont'd.)

When 9 appears in the subtrahend, do not depress any key in the column in which it occurs.

(25)	(26)	(27)	(28)	(29)	Answers
5.09	9.80	7.62	8.22	7.77	25
<u>-3.10</u>	<u>-2.93</u>	<u>-5.99</u>	<u>-6.00</u>	<u>-3.97</u>	26
_____	_____	_____	_____	_____	27
_____	_____	_____	_____	_____	28
_____	_____	_____	_____	_____	29

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)
7.16	.47	9.64	8.06	7.54	8.71
.73	2.31	6.29	<u>-7.92</u>	<u>-2.07</u> ¹⁷⁰	<u>-2.00</u>
.43	2.40	.50	_____	_____	_____
4.83	7.29	.82	_____	_____	_____
.50 ¹⁵	8.90	6.86 ¹²⁰	_____	_____	_____
.54	4.43 ⁶⁵	.44	_____	_____	_____
4.32	.77	.45	(7) 734 × 3.32 ¹⁸⁵	_____	_____
.07	1.45	.76	(8) 32.68 × 31	_____	_____
.78	4.98	7.35	(9) 8675 ÷ 25 ²¹⁰	_____	_____
1.63 ³⁰	.36 ⁸⁰	.47 ¹³⁵	(10) 469 ÷ 67	_____	_____
4.71	8.21	6.09	(11) 448 ÷ 56	_____	_____
6.62	6.83	1.66	(12) 238 ÷ 34 ²⁴⁵	_____	_____
9.40	.74	.14	(13) 1.78 + 7.29 + 8.46	_____	_____
.54	5.22	.77	(14) 9.26 + 8.91 + 7.64	_____	_____
<u>.40</u> ⁴⁵	<u>6.26</u> ¹⁰⁰	<u>7.63</u> ¹⁵⁵	(15) 2.86 + 3.79 + 9.37 ²⁹⁰	_____	_____
_____	_____	_____			
_____	_____	_____			

KEY-DRIVEN CALCULATOR

JOB No. 48 MULTIPLICATION OVER A FIXED DECIMAL	Name _____		No. of Errors _____
	Period _____ Date _____		GSPM _____
			Rating _____

(1)
 36 Items @ \$2.45
 45 " " .93
 24 " " 1.35
 34 " " 2.98

(2)
 23 Items @ \$3.46
 45 " " 5.67
 26 " " .89
 34 " " 6.50

Answers

1	
2	
3	
4	
5	
6	
7	
8	

(3)
 4 Items @ \$3.35
 25 " " 3.24
 36 " " .95
 28 " " 4.55

(4)
 35 Items @ \$4.68
 34 " " .58
 4 " " 3.00
 24 " " 4.05

(5)
 6 Items @ \$ 4.87
 3 " " 24.56
 42 " " .89
 36 " " 1.145

(6)
 22 Items @ \$6.81
 33 " " .56
 45 " " .78
 55 " " 8.35

(7)
 87 Items @ \$4.50
 67 " " 2.07
 39 " " .58
 67 " " 2.15

(8)
 47 Items @ \$.89
 92 " " 1.19
 32 " " .97
 47 " " .62

JOB No. 48 (Cont'd.)

(9)		
41 Items @	\$	.92
91 " "		1.02
8 " "		.95
47 " "		1.05

(10)		
86 Items @	\$	4.50
72 " "		.62
92 " "		1.72
49 " "		2.50

Answers	
9	
10	

TIMED DRILL

(1)	(2)	(3)	(4)	(5)
5.11	4.38	5.38	1.29	35 Items @ \$4.78
4.53	.31	.72	.90	45 " " 5.22
2.94	2.78	4.93	2.82	43 " " 2.95
.10	6.30	.91	.20	24 " " 9.53 ²²⁵
4.10	1.25	6.24	.21	
.29	5.33 ⁷⁰	.53 ¹²⁰	.62	
.67 ²⁰	6.63	.54	8.51 ¹⁷⁰	
.11	.41	.20	.84	
.96	4.84	.41	8.12	(6)
.47	3.80	.19	5.19	5 Items @ \$45.06
3.99	.15	5.95	.92	25 " " 5.78
.90	2.76	5.65	.96	6 " " .567
2.93	.48	8.37	.41	34 " " 2.39 ²⁵⁰
8.36	.94	1.48	.21	
9.48 ⁵⁰	2.53 ¹⁰⁰	7.18 ¹⁵⁰	3.52 ¹⁹⁵	

(7)	(8)	(9)	(10)	
5.32	6.07	5.45	6.35	(11) 2148 × 43
-2.07	-3.42 ²⁶⁵	-1.64	-1.06 ²⁸⁰	(12) 758.6 × 2.5
				(13) 714 × 97 ³¹⁰
				(14) 7523 × 53
				(15) 836 × 48 ³³⁰

KEY-DRIVEN CALCULATOR

JOB NO. 49 SUBTRACTION WITH 9's AND CREDIT BALANCES	Name _____ Period _____ Date _____	No. of Errors _____ GSPM _____ Rating _____
--	---------------------------------------	---

(1)	(2)	(3)	(4)	(5)	Answers
7.45 -1.93 _____	8.75 -.94 _____	6.57 -1.49 _____	6.75 -4.93 _____	5.85 -4.80 _____	1
_____	_____	_____	_____	_____	2
_____	_____	_____	_____	_____	3
_____	_____	_____	_____	_____	4
(6)	(7)	(8)	(9)	(10)	5
7.77 -.97 _____	8.22 -6.00 _____	9.60 -.42 _____	5.09 -3.10 _____	9.80 -2.93 _____	6
_____	_____	_____	_____	_____	7
_____	_____	_____	_____	_____	8
_____	_____	_____	_____	_____	9
_____	_____	_____	_____	_____	10

CREDIT BALANCES ON DUPLEX CALCULATORS

To get a true credit balance on a Burroughs or Plus duplex calculator, follow the procedure listed below for solving Problem 11.

1. Using the touch method, depress the keys for the minuend, 2.75.
2. Transfer the minuend to the rear dials by depressing the plus (+) bar on the Burroughs or by pushing the add-subtract lever **downward** on the Plus calculator.
3. Using the touch method, depress the keys for the subtrahend, 5.58.
4. Push the subtract (-) bar **upward** on the Burroughs or the add-subtract lever **upward** on the Plus calculator.
5. The rear dials on both calculators will show 99999997.17. The series of 9's to the left of 7.17 indicates a negative or credit balance.
6. To obtain the true credit balance:
 - a. Disregard the nines.
 - b. Deduct 1 from 7.17 — the only figures in the rear dials that **are not nines**.
7. Depress **small 7 - 1 - 6**. The answer, 2.83 Cr., should appear in the front dials of both calculators.

JOB No. 49 (Cont'd.)

(11)	(12)	(13)	(14)	(15)	Answers
2.75	1.19	5.90	1.92	7.12	11
-5.58	-7.52	-8.40	-7.69	-8.98	12
_____	_____	_____	_____	_____	13
_____	_____	_____	_____	_____	14
(16)	(17)	(18)	(19)	(20)	15
3.43	2.45	6.75	3.44	2.26	16
-5.76	-4.53	-8.61	-5.03	-5.67	17
_____	_____	_____	_____	_____	18
_____	_____	_____	_____	_____	19
					20

TIMED DRILL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
.63	.35	5.67	87.24 × 86	9.716 × 37	3105 ÷ 345	5382 ÷ 46 ²⁰⁰	6.45	9.54	7.86
4.25	.27	2.36					-1.92	-.53	-1.75 ²²⁵
3.36	.53	.52					_____	_____	_____
.47	3.38	.48					_____	_____	_____
8.11	4.49	4.80					_____	_____	_____
1.90 ²⁰	1.89 ⁷⁰	.65 ¹²⁰					_____	_____	_____
2.58	5.79	3.10					_____	_____	_____
.20	.91	5.63					_____	_____	_____
.74	5.21	1.04					_____	_____	_____
.36	.97	.90					_____	_____	_____
5.15	.33	1.12					_____	_____	_____
6.60	1.40	.83					_____	_____	_____
7.82	2.69	1.94					_____	_____	_____
.59	.17	2.27	(11)	(12)	(13)		_____	_____	_____
.87 ⁵⁰	4.52 ¹⁰⁰	8.68 ¹⁵⁰	1.68	3.76	9.87		_____	_____	_____
_____	_____	_____	-4.87	-5.43	-1.02 ²⁶⁵		_____	_____	_____
_____	_____	_____	_____	_____	_____		_____	_____	_____
_____	_____	_____	_____	_____	_____		_____	_____	_____

(14) 1.15 + 2.25 + 7.29 + 9.26 + 6.37 + 7.45²⁹⁰ _____

(15) 4.31 + 5.32 + 6.48 + 7.18 + 8.26 + 9.13³¹⁵ _____

KEY-DRIVEN CALCULATOR

JOB No. 50 REVIEW	Name _____		Time Completed _____
	Period _____	Date _____	Time Started _____
	GSPM _____ Rating _____		Minutes Required _____

(1)	(2)	(3)	(4)	(5)	Answers
.34	.45	2.13	4.72	3.87	1
.58	.31	.72	1.12	6.12	2
.61	1.26	.45	3.64	8.67	3
.27	3.70	9.30	9.70	1.41	4
.93	.49	.68	8.43	6.42	5
.69	8.62	7.20	2.02	7.45	6
.80 ²⁰	.50 ⁶⁰	.14 ¹⁰⁵	6.34 ¹⁵⁵	6.32 ²¹⁵	7
.14	6.42	8.53	4.87	5.10	
.47	.31	3.42	5.98	7.29	
.30	.28	.37	3.03	3.58	
.25	4.93	.39	6.32	9.68	
.73	.40	.20	7.67	9.12	
.18	1.82	6.41	1.93	4.22	
.35	3.08	4.55	2.04	8.24	
.76 ⁴⁰	7.44 ⁸⁵	.87 ¹³⁰	3.03 ¹⁸⁵	5.04 ²⁴⁵	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	

(6)	(7)
7 Items @ \$ 5.45	44 Items @ \$7.94
23 " " 35.82	35 " " .75
34 " " .85	43 " " .90
56 " " 2.145	57 " " 9.45
_____ 275	_____ 310
_____	_____
_____	_____

JOB No. 50 (Cont'd.)

(8)	(9)	(10)	(11)	(12)	Answers
7.23	3.41	4.78	6.55	7.68	8
-2.96	-1.09 ³²⁴	-.92	-9.43	-1.34 ³⁵⁵	9
_____	_____	_____	_____	_____	10
_____	_____	_____	_____	_____	11
_____	_____	_____	_____	_____	12
(13)	(14)	(15)	(16)	(17)	13
7.08	2.09	4.37	7.68	4.79	14
4.46	2.43	7.98	2.04	7.37	15
4.17	8.47	7.65	1.71	1.88	16
6.26	4.60	7.72	2.32	2.01	17
4.15	6.30	9.29	4.20	6.90	18
2.53	4.51	7.15	5.17	4.59	19
4.20 ³⁸⁰	4.79 ⁴⁴⁰	6.88 ⁵⁰⁵	5.16 ⁵⁵⁵	8.36 ⁶¹⁵	20
6.87	6.40	6.40	1.00	5.79	21
3.28	8.16	2.46	9.92	5.58	22
5.49	9.07	3.08	3.74	2.55	23
9.41	6.92	3.05	1.30	4.19	24
7.92	4.25	8.35	9.59	4.28	25
6.24	8.35	2.42	6.51	7.40	
6.28	4.14	4.14	7.85	1.34	
1.32 ⁴¹⁵	2.42 ⁴⁷⁰	6.40 ⁵³⁰	2.95 ⁵⁸⁵	6.32 ⁶⁴⁵	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	

- (18) $832 \div 26$ _____ (22) 16.24×9.2 _____
- (19) $3,815 \div 545$ _____ (23) 4.628×43 ⁷⁰⁵ _____
- (20) $748 \div 34$ ⁶⁷⁵ _____ (24) 835×414 _____
- (21) $5\,056 \div 632$ _____ (25) 467×542 ⁷²⁵ _____

